D2L

Digital transformation in higher education
Asia-Pacific is moving at different speeds

Transformation timelines vary in Asia Pacific

Countries in the Asia-Pacific region reacted quickly to the demand for online learning during the pandemic, but levels of maturity in edtech adoption vary.

Across the Asia-Pacific (APAC) region, higher education institutions are undergoing digital transformation. Though fast-moving technological change can be observed across APAC, countries are undoubtedly at different stages on this journey. This is apparent both in their reactions to the necessary shift to remote learning during the Covid-19 pandemic, and in their planning and implementation of digital transformation strategies.

Embracing digital transformation in education is more than simply putting face-to-face courses online. It refers not just to how universities and other higher education institutions implement technology, but the changes they make behind the scenes to ensure their digital investments succeed. With the right pedagogical and organisational strategies in place, institutions can take advantage of digital transformation, using it to meet the growing demands of students and faculty and create a learning environment where everything connects.

NOT ALL IN THE SAME BOAT

To understand how digital transformation is progressing around the world, D2L has undertaken a survey of 4,830 higher education respondents. Conducted in the first quarter of 2021, the survey was given to respondents working in 11 specific job titles in Australia and New Zealand (ANZ), Benelux, Brazil, Colombia, India, Mexico, the Philippines, South Africa, Singapore, and the UK. In the APAC region, the survey includes respondents from ANZ, India, the Philippines and Singapore. The data included in this eBook have been derived from the survey. It is clear that the experience for APAC countries is particularly varied. In the Philippines, for example, D2L's data shows that 4 out of 10 respondents who took steps to ensure educational continuity during national lockdowns found the transition to online learning difficult, while in ANZ just 20 per cent feel this way, with 54 per cent reporting the change was somewhat or very easy.

"India and the Philippines saw benefits from **digital** transformation during the pandemic because they had to, whereas at institutions more **advanced** in their **thinking**, the pandemic pushed them over the edge earlier than it might have done."

Nick Hutton Regional Director for Asia at D2L

> "When we see universities move from just using LMSs to store and move content, to a more explicit value proposition, this can create a 'big bang' that drives transformational change."
>
> Tony Maguire Regional Director for ANZ at D2L

Most respondents across the region moved courses and assessments online to ensure continuity when lockdowns were imposed, but to differing degrees. Respondents in India and the Philippines were more likely than those in Singapore and ANZ to move courses online during national lockdowns (72 per cent and 71 per cent respectively put courses online in the former, compared with 43 per cent and 54 per cent in the latter). This data supports the knowledge that institutions in Singapore and ANZ had already made much of their teaching available online prior to the pandemic.

Despite different levels of maturity, digital transformation strategies are being embraced in India and the Philippines: 40 per cent of Indian respondents and 42 per cent of Philippines respondents consider this a core part of their strategic plan.

WHAT LEARNING TECHNOLOGY CAN DELIVER
Maturity in digital transformation can also be detected when assessing what customers look for in learning technology across the region. Those in a less mature stage of adoption tend to focus on digitalising existing courses instead of pursuing more mature strategies that might optimise the experience for students, such as personalisation and flexibility. When asked what tools would best support their existing digital transformation strategy, virtual classroom technology was the most common response across all the APAC countries.

Learning management systems (LMS) play an important role in digital transformation strategies across all APAC countries, allowing institutions to successfully deliver remote teaching. They can also act as a catalyst for pedagogical change, according to Tony Maguire.

Institutions in India and the Philippines tend to prioritise content delivery, flexibility and accessibility in an LMS over features such as analytics or peer evaluation. Tools specifically for personalisation are comparatively low on the list of priorities for respondents in ANZ (23 per cent), the Philippines (26 per cent) and Singapore (15 per cent), while in India this figure was 32 per cent, closer to the 33 per cent of overall respondents that prioritise tools for personalising learning.

Of the respondents with access to an LMS, settings in ANZ cite flexible teaching and engaging students as something they look for in an LMS, while communication and collaboration tools also score highly, particularly in universities. Singaporean institutions feel that being able to monitor students' progress is a key feature; this is cited by around a fifth of respondents. Polytechnics in Singapore are most likely to value reliability in an LMS. Respondents in the Philippines are most likely to say they use their LMS often (63 per cent), but the features they consider most important are accessibility, flexibility and communication.

DID YOU KNOW?
Virtual classroom technology is the most commonly used tool used to support digital transformation across APAC.

FEELING POSITIVE ABOUT CHANGE

Digital transformation is, for the most part, exerting a positive influence on attitudes towards technology in education across the region. As many as 75 per cent of respondents in ANZ and 74 per cent in Singapore agree that technological developments enhance the quality of higher education, and this positive response is even higher in India (93 per cent) and the Philippines (81 per cent).

Attitudes towards technology in education could not escape the influence of the pandemic, which accelerated digital transformation in all countries in the region. Most respondents who agree the flip to remote learning during 2020 changed their attitudes to edtech say it has become more positive, although 55 per cent of respondents in private vocational settings in the Philippines say their view has become more negative if it had changed. The perceived value of online credentials compared with those from in-person education is the most positive in India, where 72 per cent of respondents think employers treat them equally.

MEETING CHALLENGES HEAD-ON

While there is growing enthusiasm for digital transformation across the region, this journey is not without its obstacles. Training support in the use of digital learning tools is often lacking. In India, for example, 58 per cent of respondents that took steps to ensure educational continuity during national lockdowns say a lack of training has been an issue. Ongoing training support for digital transformation is not a given, either. Just 30 per cent of respondents in ANZ and 21 per cent in Singapore say training and support is in place to support faculty with new tools.

In the Philippines and India, access to devices and connectivity is a common obstacle—almost half (48 per cent) of respondents with a digital transformation strategy in the Philippines say this is a hurdle to progress, and 36 per cent in India.

> "Even if a student has a device, there's no guarantee they will be able to connect, so if an instructor simply replicates face-to-face delivery on Zoom, the reaction from students is unlikely to be positive."

Nick Hutton Regional Director for Asia at D2L

Pushback against digital transformation is most likely in India and ANZ with 22 per cent of respondents citing "old organisational dynamics" as an obstacle to the success of their digital transformation strategy, and around the same proportion reporting resistance from faculty.

Most respondents across the region recognise the need to better support staff to evolve their digital teaching practices. While skills gaps in the academic community feature highly on the list of obstacles for all countries, survey respondents say closing this gap is the top priority for the next two years in both India and Singapore, and second most important for ANZ and the Philippines.

Universities and vocational settings alike anticipate a future with more diverse enrolments: provision for lifelong learning and a higher intake of adult learners are a priority across the region. Digital transformation will power institutions' ability to meet the needs of this growing body of students, so filling these skills gaps is crucial.

Australia and New Zealand: digital transformation strategies continue despite challenges

With international recruitment stalled due to the pandemic, institutions in Australia and New Zealand have pushed ahead with digital transformation in education.

The Covid-19 crisis has been tough for the higher education sector in Australia and New Zealand (ANZ). With borders closed, international recruitment was put on hold, with some predicting no return to normal before 2022. On the flipside, 2020 was the year that digital transformation in education strategies came to fruition for ANZ institutions.

More than 56 per cent of ANZ respondents who have a digital transformation strategy began plans for digital transformation earlier than 2018, and a further 20 per cent started shaping their strategies in 2018. Twenty-three per cent began implementation in 2019—before the

pandemic hit—and only 10 per cent began implementation in 2021. Fifty per cent say the pandemic has accelerated their digital transformation strategies, with 57 per cent responding by putting course material online and 52 per cent making use of online assessment.

IN WHICH YEAR DID INSTITUTIONS BEGIN PLANNING AND IMPLEMENTING THEIR DIGITAL STRATEGY?

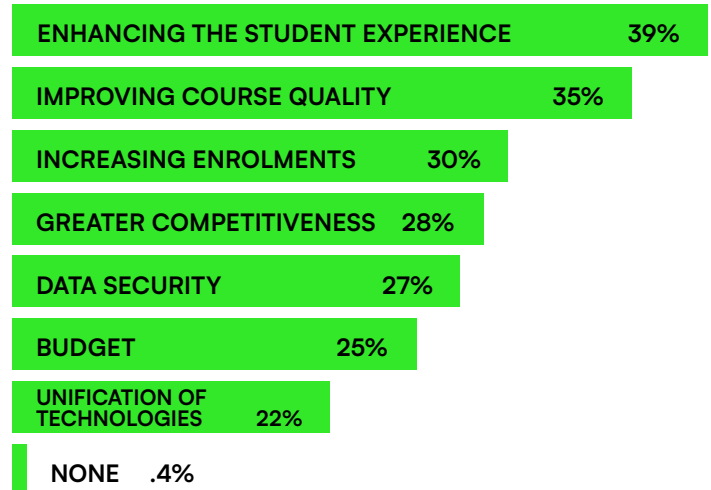| Year	Planning	Implementing
BEFORE 2018	56%	25%
2018	20%	16%
2019	17%	23%
AFTER 2019	7%	36%

PLANNING   IMPLEMENTING
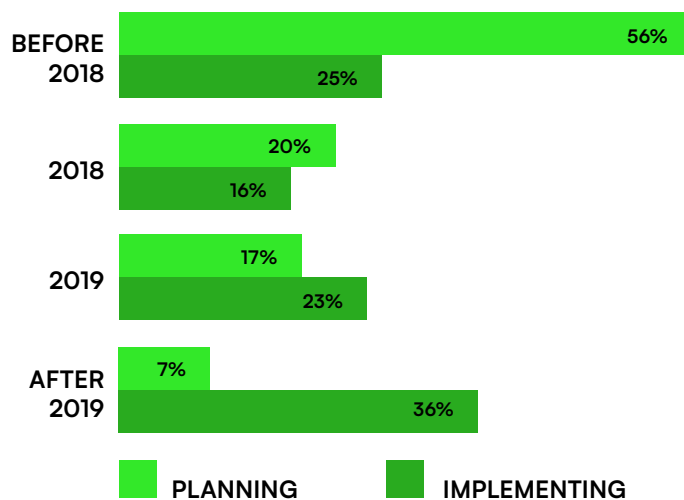
PUTTING THE STUDENT JOURNEY FIRST

The biggest driver of transformation across ANZ is enhancing the student experience, cited by 39 per cent of respondents with a digital transformation strategy. Other key factors include a desire to improve course quality, increase student enrolments and become more competitive. This echoes the outcomes institutions seek from digital transformation projects; student retention topped the priority list, closely followed by a need to increase productivity, improve student engagement and measure learning outcomes. Fifty-five percent of respondents believe employers now treat online credentials the same as an in-person education, particularly at research-focused universities, where this rises to 70 per cent.

Digital transformation in education in ANZ has certainly faced challenges. Twenty-six per cent of respondents with a digital transformation strategy cite a gap in digital skills and competencies among academics as a problem, while a quarter say cost is a barrier to progress. Many respondents say they overcome cultural challenges such as old organisational dynamics (22 per cent), a lack of clear leadership when it comes to digital strategy (21 per cent), and resistance from faculty (20 per cent). One respondent puts it succinctly when asked about the digital agenda at their institution, saying "there is a growing need for digital literacy in society".
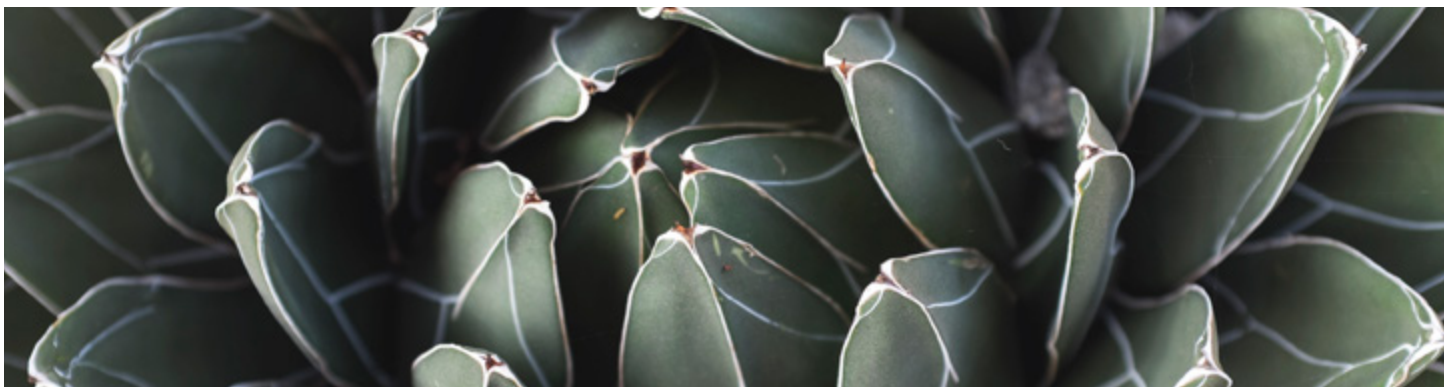
Only 30 per cent of ANZ respondents say training is available to support faculty with new tools, and fewer agree there is strong leadership support for digital transformation (26 per cent). While digital skills levels have risen over the past years, with 39 per cent of ANZ respondents that took steps to ensure educational continuity during national lockdowns finding this to be the case, this number is lower than both India (60 per cent) and the Philippines (52 per cent).

WHAT IS DRIVING INSTITUTIONS' DIGITAL TRANSFORMATION?

ENHANCING THE STUDENT EXPERIENCE	39%
IMPROVING COURSE QUALITY	35%
INCREASING ENROLMENTS	30%
GREATER COMPETITIVENESS	28%
DATA SECURITY	27%
BUDGET	25%
UNIFICATION OF TECHNOLOGIES	22%
NONE	.4%

DID YOU KNOW?
Seventy-six per cent of respondents in ANZ have a learning management system.

THE RIGHT TOOLS FOR THE JOB

Only 4 per cent of respondents surveyed offer all of their courses fully online. The mean percentage of courses offered fully online is 52 per cent, a 8 percentage point rise from the online learning provision before the pandemic. The mean is slightly lower when it comes to blended and hybrid learning, at 47 per cent. Over 75 per cent have access to a learning management system (LMS) to support this, with universities most likely to have an LMS (84 per cent) compared with technical and further education providers (71 per cent) and registered training organisations (61 per cent). But despite high levels of LMS ownership, the proportion of respondents using them often is relatively low, at 35 per cent. When asked what they look for in an LMS, flexibility and reliability are the top priorities, but almost 24 per cent cite student monitoring and tools to personalise learning as important features. "A good LMS should feel like an extension of your classroom," says one respondent.

Video assessment, virtual classroom technology and learning analytics are the tools respondents with a digital transformation strategy feel would best support their digital transformation needs, and also the ones that are working well if they have been implemented. Thirty-two per cent say virtual classroom technology supports their needs, followed by 30 per cent for learning analytics and 28 per cent for video assessment. Just 22 per cent of respondents feel mobile technologies worked well, suggesting this could be an area in need of refinement.

At ANZ universities and registered training organisations respondents with a digital transformation strategy, leadership teams are most likely to push for this transformation, with the group driving it at 37 per cent and 42 per cent of sites respectively. Leadership at technical and further education providers lag at 26 per cent.

KEEPING THE GOAL IN SIGHT

Looking forward, the majority of respondents in ANZ with a digital transformation strategy intend to see the results of their efforts within the next 1 to 2 years—57 per cent specify this period, while 30 per cent say it is likely to take between 2 and 5 years. Learning technology teams are the most optimistic regarding delivery, with 62 per cent anticipating the delivery of digital projects will take two years, compared with 48 per cent of IT leaders. Almost 67 per cent of vice-chancellors are confident this will happen.

ANZ faces strong competition in the coming months from countries with more open borders, and a recent report found that only 7 per cent of international students are prepared to follow courses fully online. However, by providing greater access to online teaching, ANZ institutions can benefit from wider reach and cost reductions. As such, digital transformation strategies remain high on the agenda, with 36 per cent of respondents reporting plans to modernise their institution's digital infrastructure and 35 per cent looking to further enhance digital skills in the academic community. Adult and lifelong learning will be an important source of students for ANZ institutions over the coming years, with 70 per cent of respondents making plans to accommodate more adult learners.

India: a period of reform for digital transformation

The pandemic is by no means the sole challenge presented to Indian universities looking to realise their digital transformation strategies in India.

Digital transformation in India's education sector has had to compete with a double-headed challenge over the past year. Alongside dealing with a deadly spike in coronavirus cases, the Indian government has recently announced ambitious reforms to its education system in the form of the **National Education Policy**, which aims to increase levels of enrolment at Indian higher education institutions from 26 per cent in 2018 to 50 per cent by 2035.

Digital transformation will underpin these ambitions, and 66 per cent of respondents to D2L's survey say the pandemic has helped to push forward their efforts in this area. Almost 75 per cent of Indian respondents shifted courses online as students were forced to attend remotely, and 70 per cent pushed assessments online as well. The mean proportion of courses offered online went up by 9 percentage points over the course of 2020, to reach 69 per cent. Meanwhile, 55 per cent of courses are available as hybrid or blended programmes.

COURSE QUALITY DRIVES CHANGES

As many as 72 per cent of respondents who took measures to ensure educational continuity during national lockdowns report that the transition was easy. Almost 25 per cent of respondents who have a digital transformation strategy began implementing it in 2020, with 45 per cent working to a bespoke institutional plan rather than a template.

The most popular driver of change for Indian higher education institutions with a digital transformation strategy is to improve course quality, cited by 55 per cent of respondents. Enhancing the student experience is also a key factor (for 45 per cent), followed by a push for increased enrolments (39 per cent) and heightened data security (34 per cent). The desired outcomes of digital transformation programmes reflect these drivers, with 50 per cent looking to improve student retention and completion, and a similar proportion seeking increased productivity.

DID YOU KNOW?

Seventy-four per cent of Indian respondents shifted their course materials online during national lockdowns, and 70% moved assessments
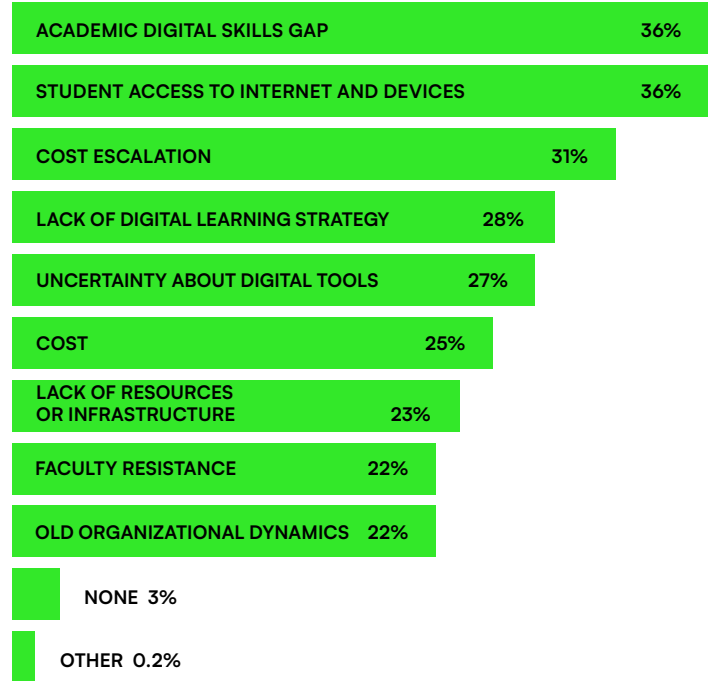
JUMPING HURDLES

One of the major challenges in India is internet access, and this is cited as an obstacle to digital transformation for 36 per cent of respondents with a digital transformation strategy. This number rises to 51 per cent for respondents from technical institutions. While this is lower than in the Philippines, where 48 per cent of respondents cite access as the main obstacle, in ANZ and Singapore the figure is far lower, at 22 and 21 per cent respectively.

More than 36 per cent of respondents in India report that a gap in digital skills and competencies among academics is an issue, and cost and technological dependence are another hurdle. Around 51 per cent think their digital transformation delivery window will be between 1 and 2 years, but 32 per cent think it could take up to 5 years.

The majority of respondents polled in India have a learning management system (LMS), with 43 per cent using them often, 46 per cent sometimes and 10 per cent rarely. The key feature sought from the LMS is flexibility, but there is a significant proportion looking for the ability to monitor students. Ease of access is a popular benefit of investing in an LMS. One respondent says "it provides unlimited access to eLearning materials, reduces learning and development costs, reduces learning and development time…and easily tracks learner progress and performance". Almost a third (32 per cent) want to use tools that can personalise

learning, and 24 per cent are looking for analytics so they can adapt learning when needed. Around 65 per cent strongly agree that technological developments have enhanced the quality of higher education, and just under 50 per cent strongly agree that a blended learning model can offer benefits over and above face-to-face teaching.

WHAT ARE THE MAIN OBSTACLES INSTITUTIONS FACE WITH THEIR DIGITAL TRANSFORMATION STRATEGY?

| Obstacle	Percentage
ACADEMIC DIGITAL SKILLS GAP	36%
STUDENT ACCESS TO INTERNET AND DEVICES	36%
COST ESCALATION	31%
LACK OF DIGITAL LEARNING STRATEGY	28%
UNCERTAINTY ABOUT DIGITAL TOOLS	27%
COST	25%
LACK OF RESOURCES OR INFRASTRUCTURE	23%
FACULTY RESISTANCE	22%
OLD ORGANIZATIONAL DYNAMICS	22%
NONE	3%
OTHER	0.2%

CLOSING THE SKILLS GAP

Over the course of the year preceding the survey, 60 per cent of respondents that took steps to ensure educational continuity during national lockdowns report an increase in digital skills. This was despite a significant proportion (58 per cent) reporting a lack of training as the biggest challenge in the transition online. Nearly 60 per cent of respondents say they have witnessed an improvement in the level of digital skills in academic and learner community, and a similar proportion say new learning technologies have been introduced to improve students' learning experience over the course of the pandemic. Almost half of respondents introduced new or uplifted content to deliver a more engaging experience, despite 53 per cent complaining that a lack of content fit for online learning had been a challenge, and 41 per cent citing concerns over budget. That said, 60 per cent say they feel very supported to integrate technology into their classroom teaching.

The switch to remote learning has had a positive effect on perceptions of digital transformation in universities. Eighty-five per cent say their own attitudes to educational technology had changed, with 90 per cent of those respondents saying this is a positive change. Looking forward, 72 per cent feel that employers now treat digital certification the same as qualifications from traditional on-campus courses, and this perception was highest in polytechnics (100 per cent) and technical institutes (75 per cent).

Improving digital skills within the academic community ranked as the top priority for respondents from Indian institutions over the coming two years (cited by 61 per cent), and 63 per cent have digital literacy initiatives in place to support this. Adult learning is another priority, with 88 per cent reporting that they have a strategy in place to cater for an increase in mature students.

Indian institutions face a number of practical hurdles in accelerating their digital transformation strategies, but enthusiasm and support for change will ensure they bear fruit.

DO RESPONDENTS BELIEVE TECHNOLOGICAL DEVELOPMENTS ENHANCE THE QUALITY OF HIGHER EDUCATION?
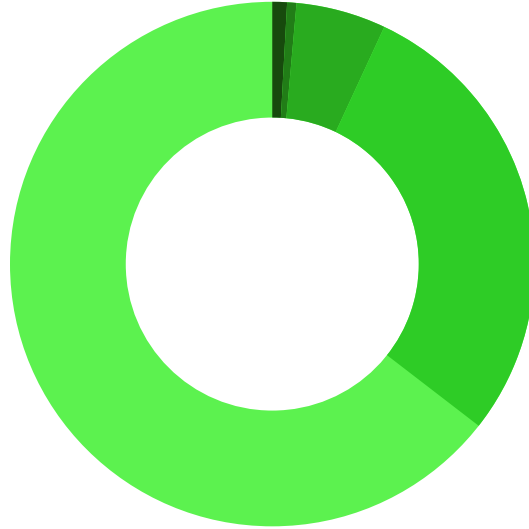
- ● .6% STRONGLY DISAGREE
- ● .6% SOMEWHAT DISAGREE
- ● 6% NEITHER AGREE NOR DISAGREE
- ● 29% SOMEWHAT AGREE
- ● 64% STRONGLY AGREE

The Philippines: digital inequality hampers transformation

Digital transformation in education in the Philippines must overcome issues around access to technology, but enthusiasm is still high.

Digital transformation in the Philippines' higher education sector has not been as easy or swift as it has been for institutions in many other countries. This is reflected in how institutions in the Philippines responded to the transition to online learning during the pandemic, with 4 in 10 respondents who took steps to ensure educational continuity during national lockdowns reporting they found the change somewhat or very difficult, according to D2L's survey. The challenges are felt most keenly by polytechnics and technical institutes, where none of the respondents report that the move to distance learning was easy.

One of the key challenges in digital transformation in the Philippines is access to devices. A paper from the **Philippine Institute for Development Studies** found that only 1 per cent of poor, 6 per cent of low-income and 27 per cent of lower to middle-income households have computers. The results of D2L's survey reflect this: almost half (48 per cent) of respondents with a digital transformation strategy cite student access to the internet and devices as an obstacle to digital transformation. Access is less of an issue in vocational settings, however.
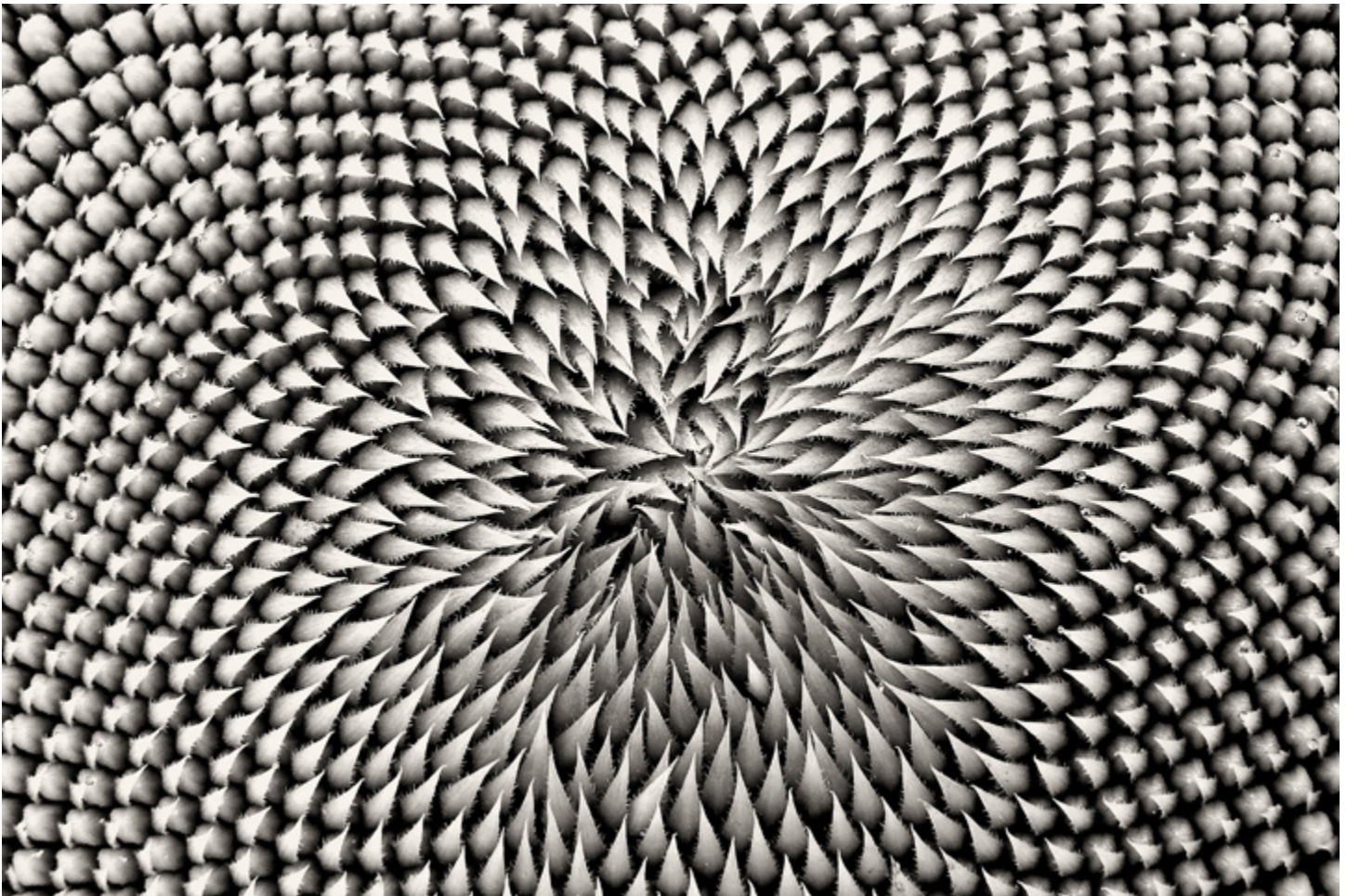
FACULTY SUPPORT THE MOVE ONLINE

Despite these challenges, the mean proportion of courses available fully online is just under 74 per cent, up from 55 per cent pre-pandemic of learning provision. Sixty-four per cent feel that Covid-19 has accelerated digital transformation in education, and 42 per cent consider it a core part of their strategic plan. The group most likely to be driving change at institutions with a digital transformation strategy is faculty, cited by 57 per cent of respondents, while students are considered a driving group for 50 per cent of respondents surveyed.

Reflecting the growing importance of digital transformation in this emerging market, 30 per cent of respondents with a digital transformation strategy began implementing it in 2020, and 20 per cent began planning in 2019. More than half (56 per cent) are driven by a desire to improve the student experience, closely followed by improving course quality. In terms of desired results, 54 per cent want to measure and improve learning outcomes, and 49 per cent are aiming to increase productivity.

Faculty resistance is less of an issue for respondents in the Philippines with a digital transformation strategy (6 per cent) than in other countries (22 per cent in India; 20 per cent in ANZ and Singapore), ranking lowest in terms of obstacles. That said, more than half of respondents in the Philippines (56 per cent) would like more training in using technology to deliver digital education during lockdowns, despite the fact 50 per cent feel there is training in place to support digital transformation at their institution.
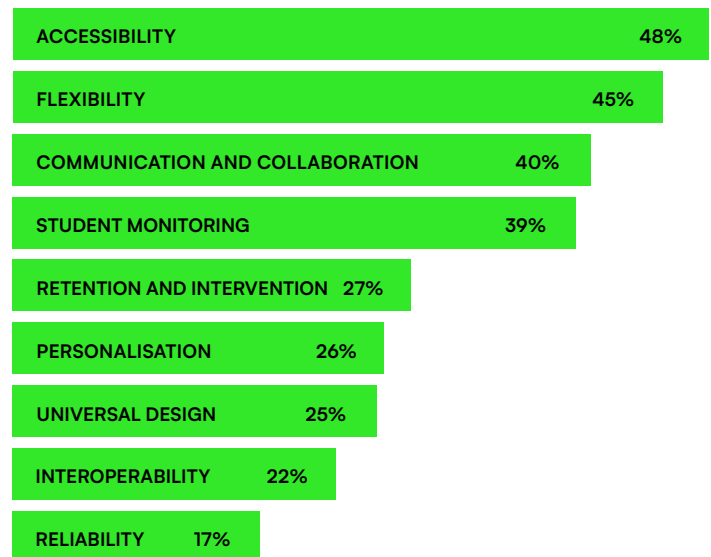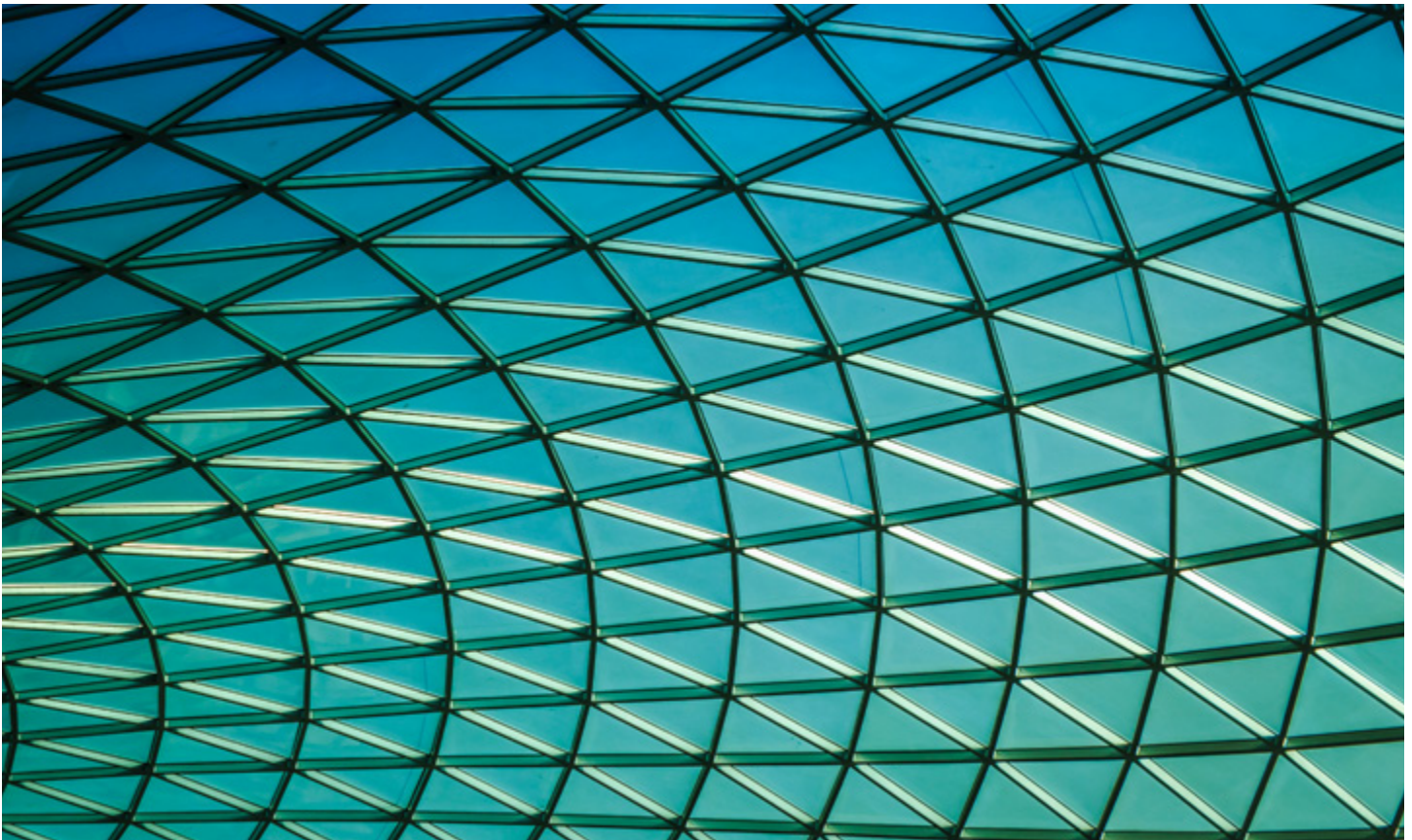
INVESTING IN THE FUTURE

Virtual classrooms are perceived by almost half (45 per cent) of respondents with a digital transformation strategy as the technology that best supports their goals, and where they are already in use, 55 per cent of respondents say they are effective. These tools work well in terms of supporting the transition to online learning, with more than half of respondents (52 per cent) that took steps to ensure educational continuity during national lockdowns reporting that virtual classrooms give students a more engaging experience.

Investment in and use of learning management systems (LMS) are core to digital transformation programmes in the Philippines, with 86 per cent reporting having one in place, and 63 per cent using it often. Accessibility and flexibility are the top reasons for investing in an LMS, and 4 in 10 respondents value the ability to use collaboration and communication tools.

When campuses closed, 71 per cent of respondents responded by putting course material and assessments online, suggesting LMSs are mainly used for content delivery. A number of respondents relied on their LMS in the transition to online learning during the pandemic — one says "it helps in providing materials needed in the learning environment, likewise in the information dissemination". Far fewer respondents are interested in using analytics (16 per cent) and peer evaluation (14 per cent) at this stage. Despite eagerness to adopt LMSs, budget issues are an obstacle for nearly half of respondents, hindering progress for many.

WHAT IS MOST IMPORTANT TO INSTITUTIONS IN A LEARNING MANAGEMENT SYSTEM?

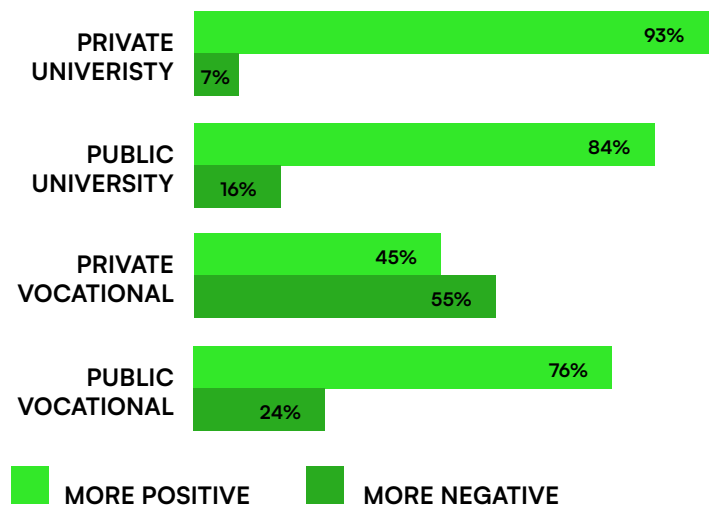|	
ACCESSIBILITY	48%
FLEXIBILITY	45%
COMMUNICATION AND COLLABORATION	40%
STUDENT MONITORING	39%
RETENTION AND INTERVENTION	27%
PERSONALISATION	26%
UNIVERSAL DESIGN	25%
INTEROPERABILITY	22%
RELIABILITY	17%

A POSITIVE OUTLOOK FOR DIGITAL EDUCATION

Attitudes towards digital education in universities shifted because of the pandemic, with 82 per cent of those who say their attitude towards edtech has changed feeling more positive as a result. Private vocational settings are less likely to feel the shift is positive, however — 55 per cent say their attitude towards digital learning has worsened. Most respondents agree that blended learning can offer benefits above and beyond solely face-to-face learning, and 58 per cent feel that employers consider digital credentials to be as valuable as a fully in-person qualification.

Almost 8 in 10 agree that digital transformation in education is needed to support growth, and this is reflected in their strategic priorities for the future. Enhancing online provisions, improving digital skills and upgrading LMSs are all rated highly.

Many institutions in the Philippines already support adult learners, and 67 per cent of respondents believe their numbers will increase in the next decade. As such, 89 per cent have a strategy in place to accommodate student journeys for adult learners, reflecting the fact that lifelong learning is the most popular initiative cited by respondents.

IF ATTITUDES TOWARDS EDTECH CHANGED BECAUSE OF THE PANDEMIC, HOW HAVE THEY CHANGED?

	MORE POSITIVE	MORE NEGATIVE
PRIVATE UNIVERISTY	93%	7%
PUBLIC UNIVERSITY	84%	16%
PRIVATE VOCATIONAL	45%	55%
PUBLIC VOCATIONAL	76%	24%

MORE POSITIVE   **MORE NEGATIVE**

DID YOU KNOW?
For 56 per cent of respondents in the Philippines, enhancing the student experience is the most important reason for pursuing digital transformation.

Singapore: digital transformation in education gains momentum

Digital transformation has been on the agenda for Singapore institutions for some years, but the sudden shift to remote learning in 2020 accelerated the pace of change.

In 2020, Singapore was hailed as one of the countries to handle the pandemic most successfully, keeping infection numbers low and easing restrictions gradually. But it has been subject to a surge in new cases, and universities have been forced to increase safety measures and shift many courses online. Managing this transition again should not prove too difficult, with over half (57 per cent) of respondents to D2L's survey reporting they found the early pandemic shift online easy.

Digital transformation in education was already underway for many organisations in Singapore, which could explain why the proportion of learning that is delivered fully online has not changed dramatically since the pandemic. The mean proportion of learning provision available online before Covid was 51 per cent, compared with 52 per cent of courses offered fully online, and the same proportion is offered as a blend of online and face-to-face learning. Singapore institutions have been planning their digital transformation strategies for some years now, with under 5 per cent of respondents of those with a digital transformation strategy only beginning their planning after the pandemic hit. Almost half (48 per cent) used a template for their digital transformation strategy.
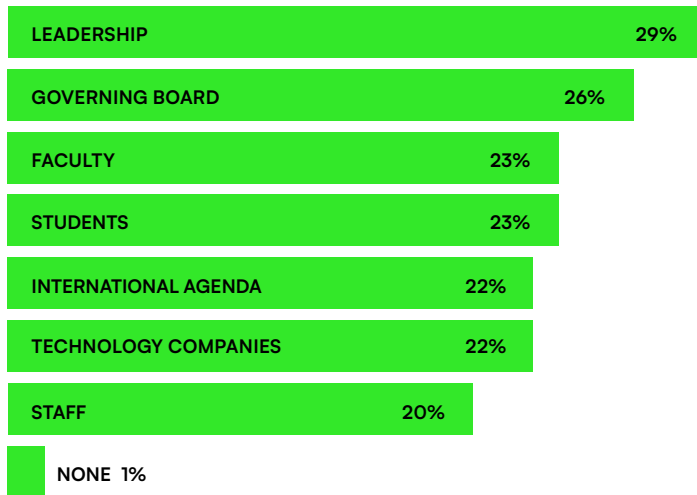
LEADING FROM THE FRONT
Leadership is the group driving digital transformation strategies the most (29 per cent), closely followed by governing boards (26 per cent). Faculty and students are slightly less influential in pushing digital strategies, cited by 23 per cent of respondents. When asked about the key drivers for digital transformation, financial sustainability comes top, closely followed by enhancing the student experience.

Although leaders tend to be the group pushing hardest for digital transformation, they are also the biggest obstacle to it. More than a fifth of respondents with a digital transformation strategy say the lack of a clear leadership is the main barrier they face, while 21 per cent say there is a digital skills gap among academics. Also, 21 per cent report issues with students' access to internet and digital devices, which may explain why almost half of courses remain physically on campus.

The cost of digital transformation is cited less, despite the fact that only 22 per cent of respondents report having a budget allocated to digital transformation. This varies depending on the type of institution, however. Polytechnics and vocational settings are most likely to have a dedicated budget (26 per cent and 25 per cent of respondents respectively), while public universities are the least likely to allocate budget for digital transformation, with just 17 per cent reporting this to be the case.

Seventy-four per cent of respondents in Singapore have access to a learning management system (LMS), according to the survey. The most important feature in an LMS is student monitoring, cited by a fifth of respondents, closely followed by a need for reliability and accessibility. "Convenient access to all of our learning packages from one source" is how one respondent describes LMS, while another says accessibility has provided "reassurance to parents and students". Data analytics is the least valued feature. Forty-one per cent of respondents that took steps to ensure educational continuity during national lockdowns say they lacked sufficient content for the transition to online learning when campuses closed, and 39 per cent say they didn't have the right support and training for the move.

WHAT GROUPS ARE DRIVING INSTITUTIONS' DIGITAL TRANSFORMATIONS?

LEADERSHIP	29%
GOVERNING BOARD	26%
FACULTY	23%
STUDENTS	23%
INTERNATIONAL AGENDA	22%
TECHNOLOGY COMPANIES	22%
STAFF	20%
NONE	1%

SLOW AND STEADY

Reflecting the city-state's existing progress in digital transformation, the pandemic had a less dramatic effect on attitudes towards the use of technology in education in Singapore than other APAC countries, with only 51 per cent feeling it had accelerated digital transformation, and almost four in 10 saying it had slowed progress. In India, 66 per cent say Covid-19 accelerated their digital strategy, and 64 per cent in the Philippines report the same.

There is more hesitancy about employers' acceptance of digital credentials in Singapore, too: 36 per cent think employers do not consider them equivalent to credentials gained from in-person education, compared with just 17 per cent in India. That said, almost 75 per cent of Singapore's respondents agree that digital transformation developments enhance the quality of higher education. A similar number (74 per cent) feel that attitudes towards technology have changed cause of the pandemic, with 64 per cent saying this was for the better.

DID YOU KNOW?
The main desired outcomes of digital transformation for 30 per cent of respondents in Singapore are improving student retention and completion and measuring and improving learning outcomes
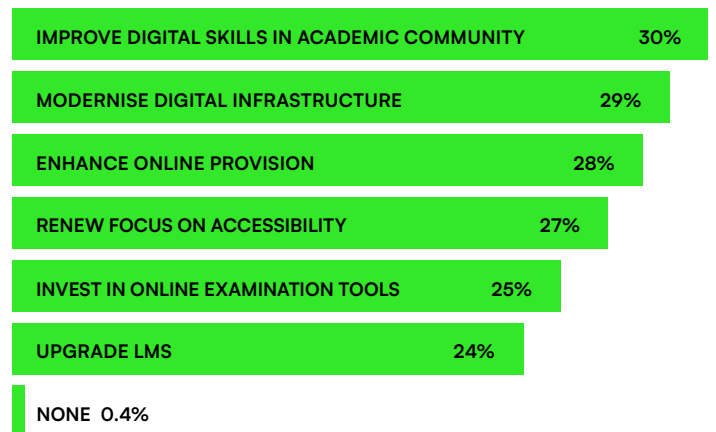
WELCOMING LIFELONG LEARNERS

More than half of respondents envisage the window for digital transformation being between one and two years, and the biggest priority during that period is to improve digital skills levels among academics (cited by 30 per cent). Other strategic priorities include modernising universities' digital infrastructure, enhancing online course provision and renewing the focus on accessibility. Almost half expect an increase in adult learners in the next decade, although 55 per cent already have a full-time cohort of adult learners enrolled. Many are mapping student journeys based on lifelong learning strategies, which are already in place at around a third of respondents, and 8 in 10 have a specific strategy to accommodate more adult learners.

Digital transformation in education is a high agenda item for higher education institutions in Singapore and is gathering momentum.

WHAT ARE INSTITUTIONS' TOP PRIORITIES TO ADDRESS IN THE FUTURE?

Priority	Percentage
IMPROVE DIGITAL SKILLS IN ACADEMIC COMMUNITY	30%
MODERNISE DIGITAL INFRASTRUCTURE	29%
ENHANCE ONLINE PROVISION	28%
RENEW FOCUS ON ACCESSIBILITY	27%
INVEST IN ONLINE EXAMINATION TOOLS	25%
UPGRADE LMS	24%
NONE	0.4%

Digital transformation in APAC: what's next?

Moving forward with newly online approaches to learning, institutions in APAC must focus on innovation and personalisation.

Universities and other higher education institutions in the Asia-Pacific (APAC) region all place value on digital transformation, even if they are at very different stages on their journey. The impact of the pandemic on attitudes towards digital transformation cannot be ignored: across the region, the majority feel that the pandemic has influenced their views on technology learning, and mostly for the better.

The challenge now is how institutions in the region move beyond a reactive strategy of replicating in-person courses online, developing a more creative and personalised approach instead.

GROWING DEMAND FOR PERSONALISATION

A high proportion of respondents in all APAC countries say they feel supported in the successful integration of technology into the classroom. Likewise, there is a strong commitment to addressing academic skills gaps to support digital transformation, with this featuring in the top two priorities for the future.

Most settings predict an increase adult learners in the coming years, and many offer a lifelong learning provision. As enrolments become more diverse — particularly given the impact of Covid-19 on international students and mobility—it will become more necessary to offer a personalised approach to learning to remain competitive. Tools for personalising learning are among the least important to most respondents when investing in a learning management system (LMS), but this is likely to change.

RETHINKING COURSE DESIGN

As institutions review curricula to meet changing demand, features such as analytics and peer evaluation will become increasingly important. Greater insights about student participation mean academics can adapt courses and give more specific feedback, while peer evaluation passes more autonomy to students over their learning and attainment. However, challenges remain around access to devices and internet connectivity, particularly in India and the Philippines. One way to mitigate the impact of these challenges is to come up with more creative approaches to delivering learning, such as supporting students to download resources when they have internet access and complete the work at their own pace.

Increasingly, academics will need to feel comfortable with digital tools and new technologies that support a more hybrid model of learning where students might be online or on campus, working synchronously or asynchronously, or may not always have access to devices and the internet. Flipped learning sessions, where students use their online learning as a foundation for their in-person time with peers and educators, will become more common, increasing the need to get the most out of LMS features such as data analytics, communication and personalisation. Building resilient strategies to accommodate students through what could be unpredictable times in the coming years will be crucial to the success of digital transformation strategies.

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ABOUT D2L

D2L is transforming the way the world learns, helping learners of all ages achieve more than they dreamed possible. Working closely with clients all over the world, D2L is supporting millions of people learning online and in person.

D2L Brightspace is an award-winning, cloud-based learning platform built for people who care deeply about student success and equity in education. Brightspace is a robust solution being used by more than 1,000 customers in over 40 countries across K-12, higher education, healthcare, government, associations and the corporate sector.

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