AMBA & BGA

EDUCATION TECHNOLOGY RESEARCH

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INTRODUCTION FROM AMBA & BGA

At the start of 2020, technology was hitting the headlines. The World Economic Forum had stated that technology was poised to force us – as a global society – to rethink how countries develop, how organisations create value, and even what it means to be human.

As such, at the start of 2020 AMBA & BGA launched a piece of research, exploring Business School leaders' views into technology, and on the applications of technology within Schools.

That research, published in January last year, found that while Business School leaders agreed these technologies were important, they lacked the confidence that their Schools were ready to take the leap and put them into practice. The report's conclusions suggested the potential for more clarity around how new technical capabilities can best be applied to learning and in the operations of management education providers.

Covid-19 was not a term we had considered in the methodology: survey participants had no idea they would see out the majority of 2020 in lockdown and quarantines.

They could never have predicted the months they would spend implementing technologies they had previously thought impossible; innovating to keep the wheels of their organisations turning; ensuring their millions of students would retain access to teaching and learning; or finding solutions and agility they never believed they could.

Last year, for many, represented a tipping point in terms of education technology and was the year Business School leaders crossed the Rubicon into uncharted tech territory and into a future that has, undoubtedly, taken business education into a new phase from which we can never return.

This survey you are about to read, which polled a similar group of Business School leaders as the survey at the end of 2019, tells the story of the education technology in 2020; and how Business Schools turned a crisis into an opportunity.

We would like to express our gratitude to our report sponsor, Barco for their generous support and insight in bringing this project together, along with the 216 individuals who took the time and effort to complete the survey. I would also like to thank my colleague Ellen Buchan in analysing the results you're about to read.

We hope that this report provides AMBA & BGA's network with a chance to reflect on the breadth of exciting technology that made business education possible in 2020 and provides some food for thought for the future as we move into a 'new normal' in 2021.

David Woods-Hale
Director of Marketing and Communications
AMBA & BGA

In 2020 the door to a new era opened to us, fast-forwarding the entire society into a future we were not expecting – what unfolds now as the 'new normal´.

In education, these challenging times called for lightspeed measures to ensure learning continuity: institutions had to quickly react, and teaching went entirely online overnight; the usual face-to-face learning being replaced digitally in an overwhelming majority.

This shift led to emergency remote methods initially – with mostly web-conferencing tools being adopted en-masse, fulfilling the immediate need of teaching and learning continuity.

Nonetheless, as this research suggests, that approach is posing some challenges, and several areas for improvement have emerged with the most important ones being: the transformation of courses for an online format; the lack of interaction between and with participants; and the difficulty of identifying gaps in students' understanding.

Due to these challenges encountered in the first part of the year, but because of the need to adapt and stand out in the academic world, educators are shifting their mindset towards a long-term approach, going from digital replacement to digital transformation.

While we do not yet know when the Covid-19 crisis will be over, we do have one certainty: education and teaching have been transformed irreversibly, as the resistance to remote learning and the preconceptions associated with it have diminished significantly.

The 'new normal' in education is digital and flexible, transcending geographies and spanning the globe, overcoming borders and cultural barriers. As learners have experienced during the past year, there is not one way of learning, but a myriad which will be delivered in various blended ways – face-to-face, fully remote or hybrid/virtual, synchronous, or asynchronous.

That is why, they will be demanding more flexibility from all institutions and from Business Schools even more so, as centers leading innovation in education. What will be expected in the 'new normal'? A wider range of delivery options but also of formats: customised, specialised tracks; or shorter, bite-sized training activities; more emphasis on interaction and engagement, interesting and rich multimedia content, be it online or on-site.

Adding the necessity for lifelong learning, the need for upskilling and reskilling to keep pace with the ever-changing workforce landscape, Business Schools will be catering to many different groups -– from digital native students to busy executives studying while working.

To match the evolving expectations of these different groups, accelerated by the ´new normal´, digital transformation as a well-defined, long-term strategy in mind is key. This long-term strategy must have pedagogy at its heart. Putting pedagogy first will require an in-depth reflection of the educational needs and objectives of learners and of teachers as well as of the methods to achieve these. It will also require a multi-disciplinary approach: programme directors working together with instructional designers and specialists in education technology, AV and IT, for a successful and sustainable result.

We, at Barco, have always been co-creating our virtual classroom solution with experts in pedagogy from the world's leading Business Schools, universities and corporate learning and development departments.

The true role of education technology is to become an enabler of positive learning outcomes.

Implemented correctly, education technology will not only enhance the learning experience and results of students and faculty, but also open a wealth of untapped possibilities for Business Schools.

The data gathered by education technology tools can bring new and valuable insights into the way and amount students engage when taught to and enable improvements and redesigns of the learning journey for enhanced experiences. Further on, Business Schools will be able to expand farther than ever, teaching to a pool of students wider than ever, scaling their teaching to a global level giving access to new segments of learners. It will no longer matter where a student is geographically, but academically, bringing together into one virtual classroom the best talents worldwide.

We believe the future of education is bright and full of exciting possibilities for those who stay agile and are ready to embrace and adapt to this ´new normal´ with a long-term vision, pedagogy at the forefront and technology as the catalyst for innovation.

Simone Hammer,
Global Marketing Director, Learning and Training Solutions,
Barco

EXECUTIVE SUMMARY

IMPACT OF THE COVID-19 PANDEMIC

- 91% of Business School leaders have increased the amount of digital or online learning opportunities since the start of the Covid-19 pandemic; 85% conducted lectures using virtual teaching technology; 61% offered flexible timings for delivering programmes; and 59% increased the capacity of teaching related to emerging technology and innovation in 2020.

- 96% of Business School leaders said their School had increased the use of online delivery methods for programmes, because of Covid-19; 71% of Business School leaders used online delivery methods pre-pandemic.

- 84% of courses were taught in classrooms pre-Covid-19 and this dropped to just 24% in 2020, while online delivery shot up from 8% pre-Covid-19 to 68% during the pandemic.

- 98% of Business School leaders believe their School was either very successful or fairly successful in taking programmes online due to Covid-19.

INVESTMENT IN DIGITAL TEACHING AND LEARNING

- 74% of leaders at Business Schools are investing a moderate amount or more into online teaching for MBA programmes, making the MBA the area receiving the most funding for digital teaching.

- 88% of Business School leaders believe the effectiveness of digital teaching on the MBA programmes at their Schools to have been either very effective, or somewhat effective.

- The most commonly cited teaching method being used at Business Schools is live video conferencing systems from PC, which 89% of participants say is being used at their institutions. This was followed by classroom-based delivery (cited by 80% of participants); elearning / MOOCs (34%); live virtual classrooms from studios (33%); and live online virtual classroom software PCs (26%).

PERCEPTIONS OF THE SUCCESS OF DIGITAL TECHNOLOGY ON BUSINESS EDUCATION

- 52% of Business School leaders believe that online teaching methods are the same as, somewhat better, or much better than traditional classroom teaching.

- 48%, admitted online teaching methods were somewhat worse than a traditional classroom experience.

- 76% of participants believe less travel for students was the biggest advantage of online teaching; 71% value the fact they could record sessions; 71% value the reduction in travel time for staff enabled by online teaching; and 70% think the biggest advantage is international collaboration.

- The major challenges faced by Business School leaders when delivering online education include connection issues from students (cited by 85% of respondents); lack of student engagement (73%); changing the design of programmes to make them suitable for students (61%); and connection issues from educators (55%).

- 73% of Business School leaders believe the biggest problem with online teaching is transforming courses to fit an online format. Other problems frequently cited by survey participants include gaining feedback from students on their understanding (cited by 52% of respondents).

- 45% believe that technology is ineffective at delivering networking opportunities; 39% think online technology is ineffective in soft skills development; and 37% believe technology had not been effective at delivering wellbeing initiatives for students in their institutions.

- 87% think online technology was either somewhat or very effective in delivering flexibility in learning; and more than two thirds (67%) rated the effectiveness of online technology in supporting team projects and collaboration.

LOOKING AHEAD

- 82% of Business School leaders are planning to invest further in technology over the coming two years to enable online teaching.

- Business School leaders predict that blended and hybrid models will replace the traditional classroom-based delivery of courses in the next five years.

- 21% of leaders think MBA programmes will be taught in a traditional classroom format in five years, while 38% believe blended delivery will be the most prevalent form of teaching; and 38% predict a hybrid approach.

- Digitalisation is deemed to be the most important concept in the running of the Business School of the next 10 years, with almost two thirds of leaders (63%) believing it to be very important.

- 83% of leaders think it is either very likely or fairly likely that the fundamentals of the MBA will change in the next 10 years, compared with 77% who were of this opinion in late 2019.

METHODOLOGY AND PARTICIPANT DEMOGRAPHICS

Between 19 and 30 October 2020, AMBA & BGA circulated an online questionnaire, polling its network of Business School decision makers on trends in education technology and online learning. A total of 216 Business School decision makers participated in the quantitative survey.

Throughout the following report, the terms 'participants', 'survey respondents', 'Business School leaders', and 'leaders' are used interchangeably when describing the research sample.

To complement the quantitative survey, researchers interviewed 10 survey participants to compile more in-depth qualitative analysis, and excerpts from these interviews are included, in a redacted format, in the following report.

Of those surveyed 43% represented Business Schools based in Europe (excluding the UK but including Russia); 13% in Latin America; 12% in the UK; 12% in Africa; 8% in Asia and the Middle East (excluding China and India); 5% in North America and the Caribbean; 5% in China and Hong Kong, China; 2% in India; and 1% in Oceania.

Almost half of survey participants (48%) classify themselves as Deans or Directors at Business Schools; 13% work in delivering management programmes at Schools; 10% are management academics; 6% are other Business School professionals (including careers and alumni staff); and 12% work in another role within Business Schools. Business Schools in the public sector are represented by 43% of participants, followed by private not-for-profit institutions (33%), and private for-profit institutions (20%).

More than nine out of 10 (95%) of the participants' Schools provide MBA programmes; 76% provide executive education; 70% provide master's degrees; 58% provide bachelor's degrees; 57% provide PhDs or doctorates; 43% provide master of science degrees (MScs); and 13% provide Massive Online Open Courses (MOOCs).

Participants were asked: 'Approximately, how many students are currently enrolled at your Business School?'. The mean figure was 3,101. Participants were asked: 'Approximately, how many students are currently enrolled in MBA programmes at your Business School?'. The mean figure was 265.

SECTION 1: THE IMPACT OF COVID-19 AND TECHNOLOGICAL INNOVATION IN BUSINESS EDUCATION

The first section of the report sought to analyse and compare the responses of Business Schools across the world, in terms of the Covid-19 pandemic and the migration from physical to online teaching and learning, in light of lockdowns, social distancing, and enforced quarantines, during 2020.

For background, participants were first asked how far they agree with a range of statements, pertaining to their Schools. The results are outlined in Figure 1. Almost half (48%) strongly agree that their School has delivered new and innovative ways of delivering programmes in the past year; 82% either strongly agree or tend to agree that the curriculum of their School has been informed by engaging with industry; and 60% agree that their institution is 'well prepared' to embrace the opportunities of the fourth industrial revolution.

However just over a third (36%) agree their School does not have any significant financial challenges; just under a third (32%) agree their School has 'a challenging relationship' with its affiliated university; and almost two thirds (65%) agree the delivery of content of their MBA programmes could be improved, so challenges remain for the majority of survey participants.

In the autumn of 2019, in a separate survey by AMBA & BGA, the same question was posed to a similar sample of Business School decision makers and just 64% said, in 2019, that their Schools had delivered new and innovative ways of delivering programmes in the past year. The 24-percentage-point year-on-year increase in this positive perception, illustrates the impact that Covid-19 has had Business School innovation.

In the same survey in 2019, 50% of participants said they thought their School was embracing the opportunities of the fourth industrial revolution. The jump of 10 percentage points to 60% of leaders that feel this way now, again demonstrates how Business Schools have used the crisis to take advantage of technology.

Participants were asked – prior to the pandemic – what their motivations had been in terms of implementing new forms of technology at their Schools.
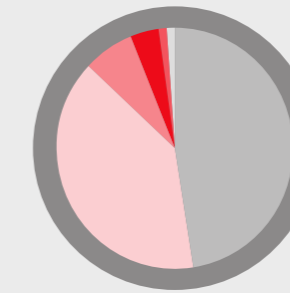
Figure 1. To what extent do you agree or disagree, if at all, with the following statements about your Business School?
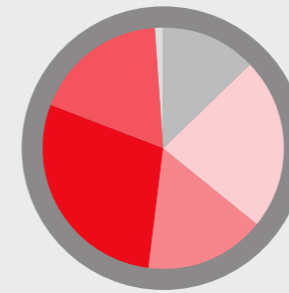

My Business School does not have any significant financial challenges

Strongly agree	13
Tend to agree	23
Neither agree nor disagree	16
Tend to disagree	29
Strongly disagree	18
Don't know / non applicable	1

My Business School has delivered new innovative ways of delivering programmes in the past year

Strongly agree	48
Tend to agree	40
Neither agree nor disagree	7
Tend to disagree	4
Strongly disagree	1
Don't know / non applicable	1
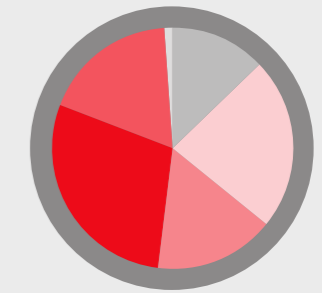
My Business School wants to grow domestic cohorts more than its international cohort

Strongly agree	9
Tend to agree	23
Neither agree nor disagree	32
Tend to disagree	23
Strongly disagree	10
Don't know / non applicable	3
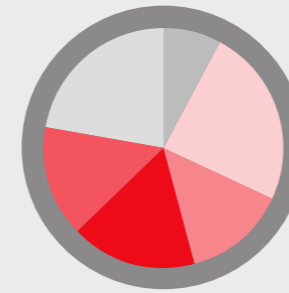
My Business School has a challenging relationship with its affiliated university

Strongly agree	8
Tend to agree	24
Neither agree nor disagree	14
Tend to disagree	17
Strongly disagree	15
Don't know / non applicable	22
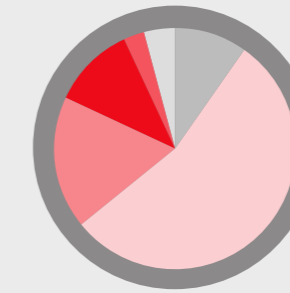
The delivery or content of my MBA programme could be improved

Strongly agree	10
Tend to agree	55
Neither agree nor disagree	18
Tend to disagree	11
Strongly disagree	3
Don't know / non applicable	4
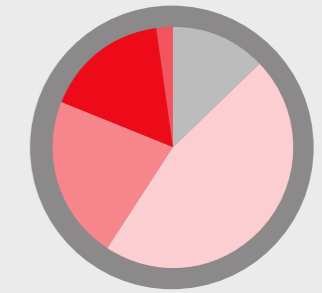
My Business School is well prepared to embrace the opportunities of the fourth industrial revolution

Strongly agree	13
Tend to agree	47
Neither agree nor disagree	22
Tend to disagree	17
Strongly disagree	2
Don't know / non applicable	0
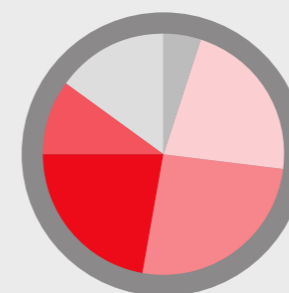
My affiliated university is a trail blazer in shaping the way my Business School makes changes

Strongly agree	5
Tend to agree	22
Neither agree nor disagree	26
Tend to disagree	22
Strongly disagree	10
Don't know / non applicable	15
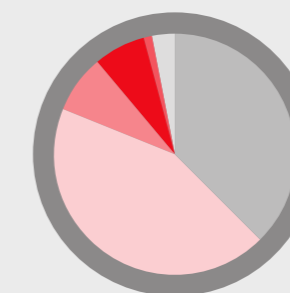
The curriculum of my Business School's MBA has been informed by engaging with industry

Strongly agree	38
Tend to agree	44
Neither agree nor disagree	8
Tend to disagree	7
Strongly disagree	1
Don't know / non applicable	3
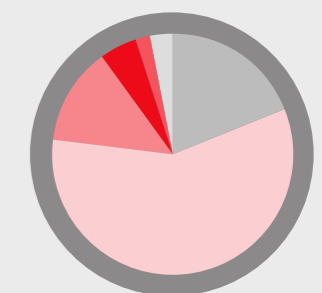
The curriculum of my Business School's MBA has been shaped by engaging with its alumni

Strongly agree	19
Tend to agree	58
Neither agree nor disagree	13
Tend to disagree	5
Strongly disagree	2
Don't know / non applicable	3

As figure 2 demonstrates, the most common reason (cited by 73% of participants) was meeting the expectations of prospective students; followed by the need to keep up with competing Business Schools (57%).

Following this, Business School leaders were asked to share some insight into examples of how their Schools had innovated in terms of programme delivery during the past year – and in light of the Covid-19 pandemic.

As Figure 3 illustrates, more than nine out of 10 (91%) increased the amount of digital or online learning opportunities; 85% conducted lectures using virtual teaching technology; 61% offered flexible timings for delivering programmes; and 59% increased the capacity of teaching related to emerging technology and innovation in 2020. Of the 3% of respondents who selected 'other' initiatives included a full redesign of the MBA programme at one School; and a training programme for faculty at another.

Participants were asked if they used online delivery methods in terms of teaching prior to the Covid-19 pandemic. More than seven out of 10 Business School leaders (71%) said they did; and 27% said they did not. However, as Figure 4 shows, a massive 96% of participants said their School had increased the use of online delivery methods for programmes, because of Covid-19.

In an open-ended question, respondents were asked about the areas in which they had increased the use of online delivery methods, and common answers included the use of technology for synchronous and asynchronous learning for example Google Classroom, Zoom, or Microsoft Teams.

The university demonstrated great adaptability levels and the efforts in terms of faculty qualification derived in plausible results. In this way and after a tough start, the Institution has achieved a remarkable proficiency in different methodologies, new approaches that directly impact students' experience and that are successful according to their expectations (for example content, networking, interaction, and learning). Online teaching methods are just different compared to the traditional face to face methods and both have pros and cons. Online methods are more flexible in terms of time and location. However, interaction and participation levels may be less active.

MBA Director, Colombia

Figure 2. What have previously been the motivations to implement new technology into your Business School (pre-Covid-19)?

Meeting prospective students' expectations	73%
Keeping up with competing Business Schools	57%
Need to prepare students for the digital workplace	49%
Wanting to be ahead of the market	43%
Pressure from the higher education market	35%
Other	7%
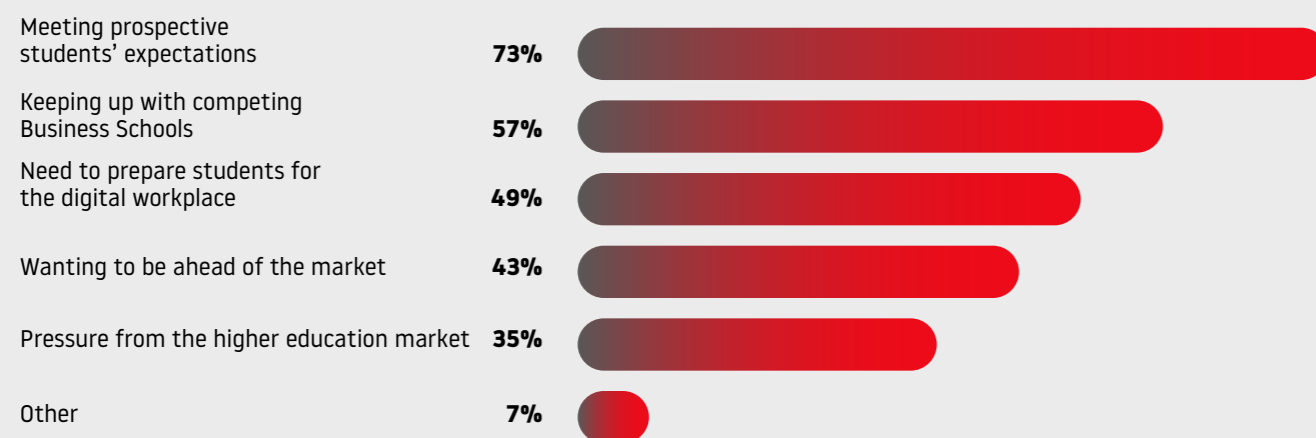
Figure 3. In what ways has your Business School innovated its programme delivery in the past year?

Increased the amount of digital/online learning opportunities	91%
Conducted lectures using virtual teaching technology	85%
Offered flexible timings for delivering programmes	61%
Increased capacity of teaching related to new technology and innovations	59%
Collaborated with industry to deliver programmes	55%
Changed the Business School's delivery strategy to be more fit for purpose	55%
Heavily invested in the latest technology within the campus	48%
Introduced more evening classes to allow students to continue working while studying	33%
Introduced more step-free access facilities for students and staff with a physical disability	23%
Made substantial provisions for women with young families to study	16%
Other	3%

Figure 4. Did you increase the use of online delivery methods in programmes at your Business School because of Covid-19?
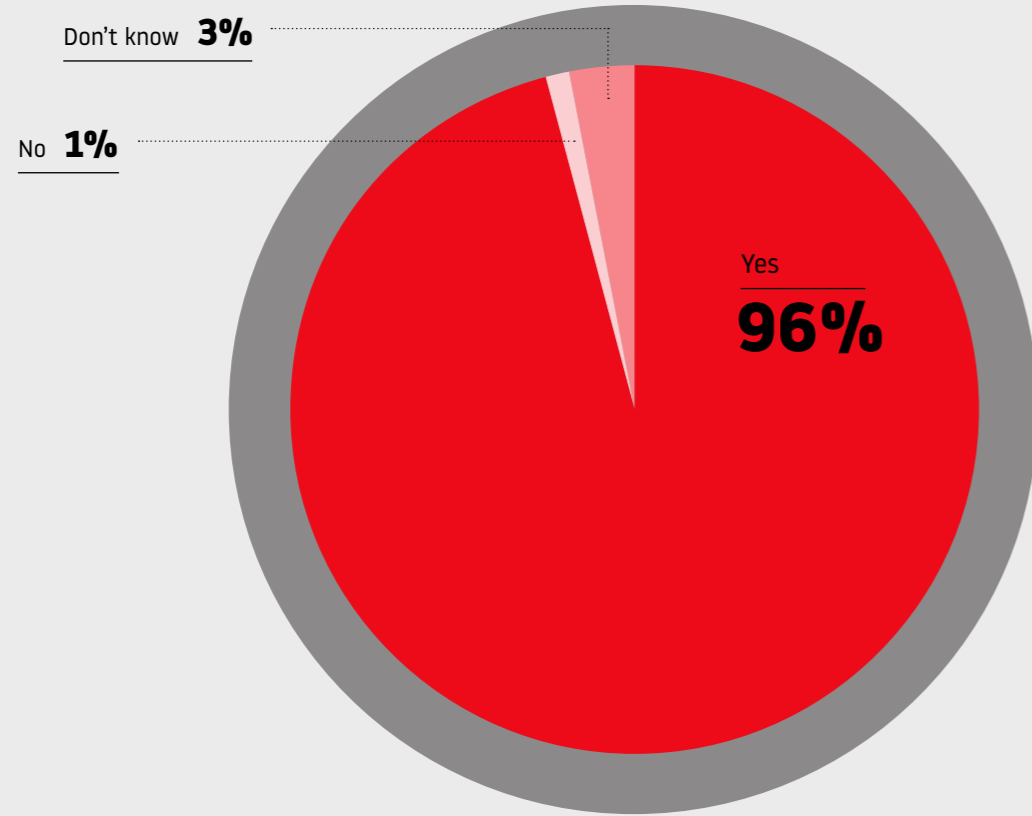
Don't know **3%**

No **1%**

Yes
96%
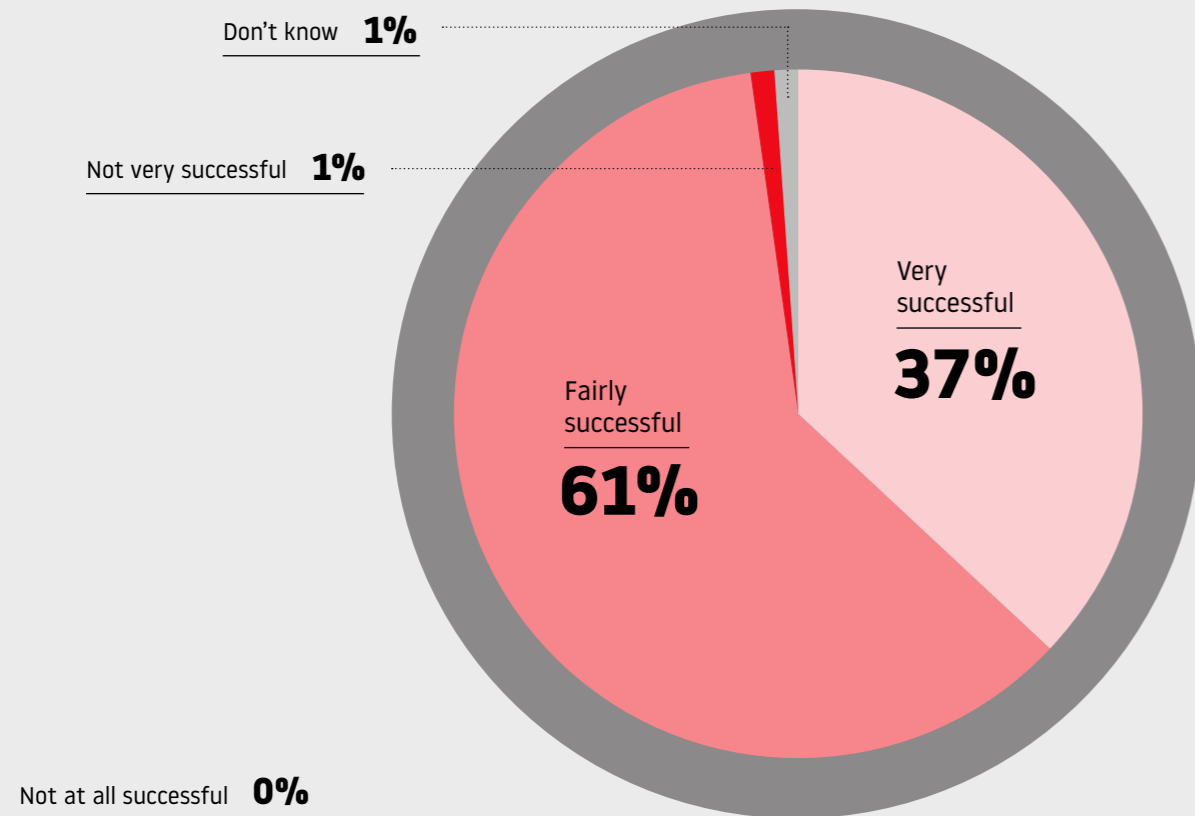
Business School leaders, globally, agree that their institutions have been successful in terms of their innovation in the past year and, as illustrated in Figure 5, 98% of participants believe their School was either very successful or fairly successful in taking programmes online due to Covid-19.

The survey sought to measure, in real terms, the seismic shift from classroom to online in 2020. The findings reveal that, on average across the participants' Schools 84% of courses were taught in a classroom pre-Covid-19 and this dropped to just 24% on 2020, while online deliver shot up from 8% pre-Covid-19 to 68% during the pandemic.

Blended learning (which involves both online and classroom-based teaching) remained at the same level, increasing by just three percentage points from 12% pre-Covid-19, to 15% during the pandemic.

But hybrid learning (which involves some students joining synchronous classes physically and others accessing synchronous learning virtually) increased by 14 percentage points, on average, from before to during the pandemic.

> As well as the plans to update and regenerate some of the modules, the obvious driver for the innovation this year has been Covid-19. We've had to react to that. We've seen that as an opportunity. We've innovated with our consultancy project, so students are working with businesses virtually. The indication is that this is going to be the new way of working. And businesses are moving towards a more technology-based way of working. What Covid-19 has done is allow us to accelerate some of those discussions and put them into actual delivery.
>
> **Programme Director, UK**

Figure 5. How successful do you think your Business School was in taking programmes online due to Covid-19?

Don't know **1%**

Not very successful **1%**

Very successful
37%

Fairly successful
61%

Not at all successful **0%**

Figure 6. What proportion of courses were (and are now) taught in the following ways?

	Pre-Covid-19	During Covid-19
Classroom	84%	24%
Online	8%	68%
Blended	12%	15%
Hybrid	6%	20%
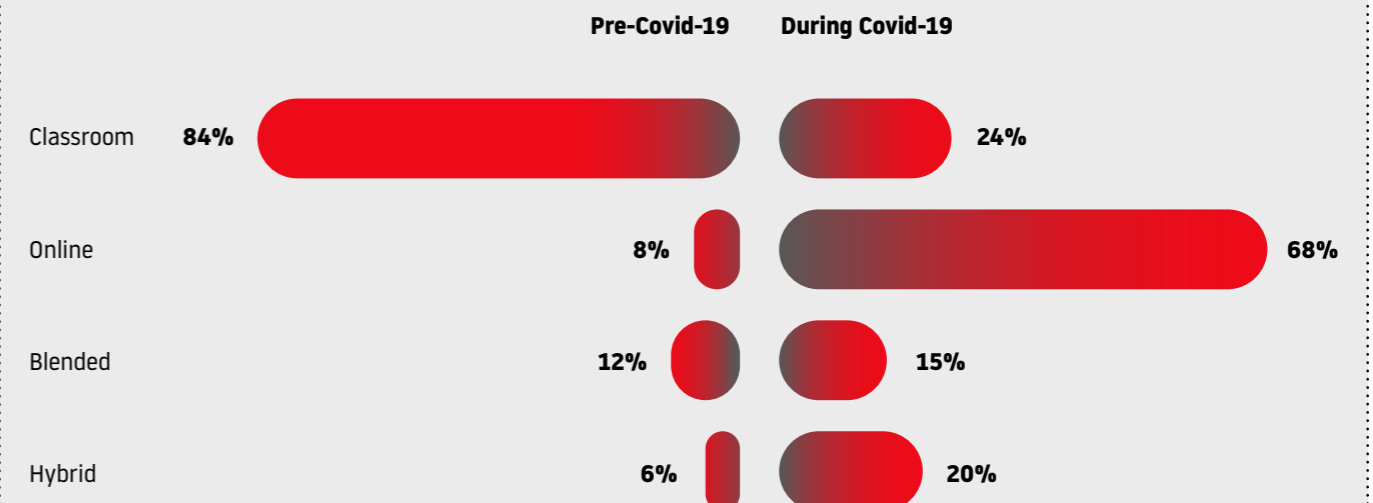
SECTION 2: FORMAT OF STUDY

This second section of the report looks at the digital and education technology strategies currently adopted at participants' Business Schools, as well as the impact and return on investment measured from these initiatives. First, participants were asked about the investments their Schools were making for digital teaching on a variety of programme formats (MBAs, executive education, bachelor's degrees, MSc degrees, MOOCs, and professional / custom education).

As Figure 7 demonstrates, across all the courses listed above, fewer than a third of participants believe their School is investing 'a lot' into any digital teaching methods. However, significantly larger proportions do believe either a moderate amount or a little is being invested into each of them.

Considering the MBA, just under three quarters (74%) of participants' Business Schools are investing a moderate amount or more into online teaching, making the MBA the area receiving the most funding for digital teaching. Master's degrees are also receiving a moderate amount of investment or more at 69% of Schools surveyed, and executive education is receiving a similar level of funding for digital teaching at two thirds (66%) of participants' institutions.

Doctorate level courses are not receiving the same levels of investment for digital teaching at most Schools, with just 34% of participants saying their School is investing a moderate amount or more in digital teaching for these programmes; and 14% admitting no budget has been invested in digital teaching for doctoral programmes. This is due, in part, to the research and asynchronous aspects of these programmes.

In terms of the effectiveness of digital teaching, as Figure 8 shows, survey respondents are satisfied with the impact. Almost nine out of 10 (88%) believe the effectiveness of digital teaching on the MBA programmes at their Schools to have been either very effective, or somewhat effective.

Similar encouraging observations of digital learning being very, or somewhat, effective are measured by participants across MSc degrees (85%), executive education (78%), and bachelor's degrees (76%). However, it is important to note, while large proportions of respondents rate their

My main challenge was how we could still deliver value to students that had connected with the idea of the practical experience, which is the nature of our particular MBA. We kept the programme going, in spite of all the chaos in March and February. We kept the lectures running because full time students, have got a limited time to be here. All those kinds of things meant that my objective was to make sure that we still delivered the programme in the time frame that we promised. That's been successful.

Programme Director, UK

Figure 7. At your Business School, how much do you invest in digital teaching methods for each of the programmes below?

	A lot	A moderate amount	A little	None at all	Don't know
MBAs	28%	46%	21%	2%	2%
Executive education	22%	44%	25%	7%	3%
Bachelor's degrees	22%	38%	30%	4%	6%
Master's degrees	25%	44%	24%	3%	3%
Master of Science (MSc)	22%	35%	35%	3%	5%
Doctorates	10%	24%	43%	14%	9%
Massive Online Open Courses (MOOCs)	6%	44%	50%	0%	0%
Professional education (tailor-made for companies)	14%	40%	30%	8%	8%
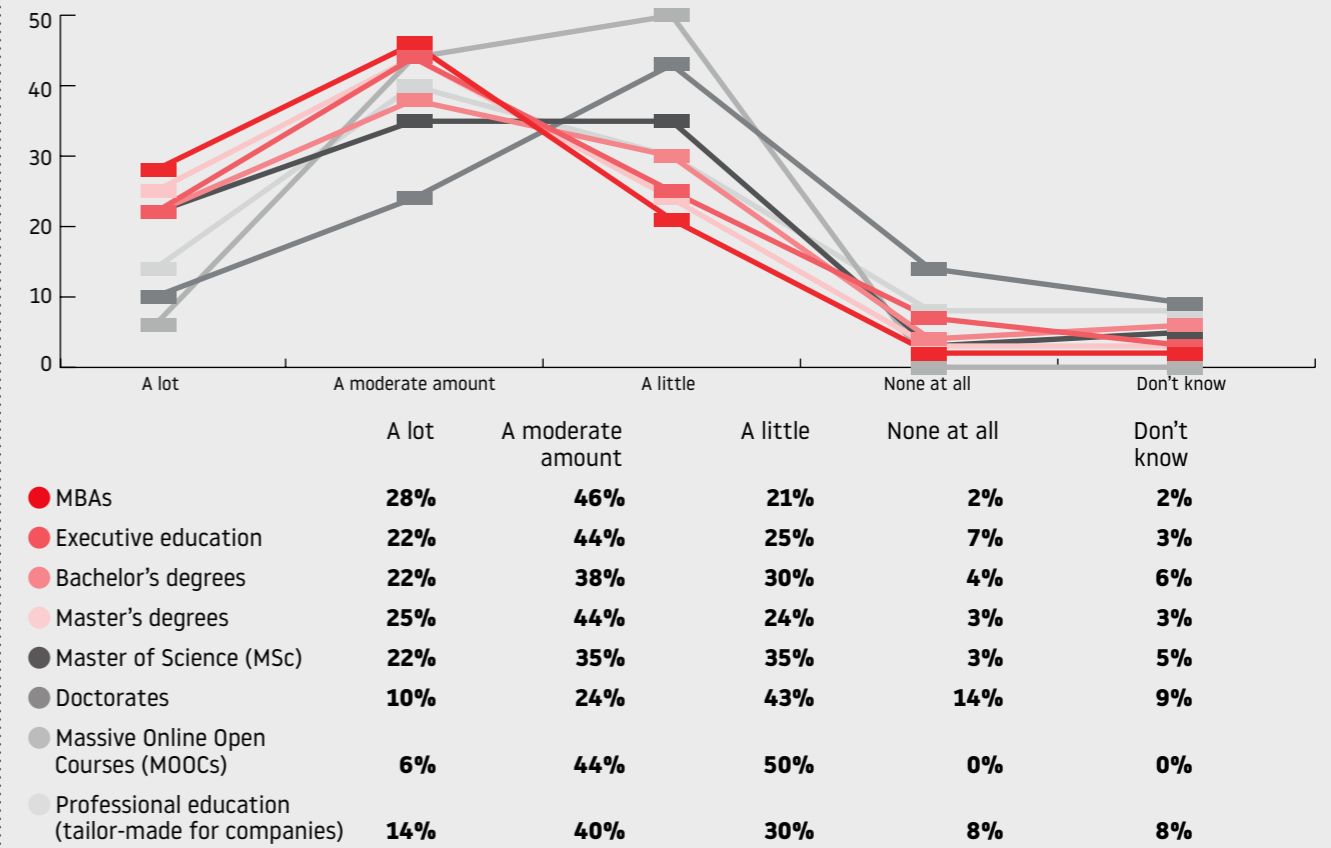
Figure 8. How would you rate the effectiveness of digital teaching methods in the following programmes?

	Very effective	Somewhat effective	Neither effective nor ineffective	Somewhat ineffective	Very ineffective	Don't know
MBAs	28%	60%	5%	6%	0%	2%
Executive education	17%	61%	7%	8%	1%	7%
Bachelor's degrees	10%	66%	15%	4%	0%	5%
Master's degrees	20%	67%	7%	3%	0%	3%
Master of Science (MSc)	13%	72%	8%	3%	0%	3%
Doctorates	15%	41%	18%	5%	5%	15%
Massive Online Open Courses (MOOCs)	50%	39%	0%	0%	0%	11%
Professional education (tailor-made for companies)	15%	52%	9%	8%	6%	11%

Figure 9. Which of the following teaching methods does your Business School use to teach programmes?

Method	%
Live videoconferencing systems from PC	89%
Classroom-based delivery	80%
Elearning or MOOCs	34%
Live virtual classroom from room/studio	33%
Live online virtual classroom software from PC	26%
Other	2%
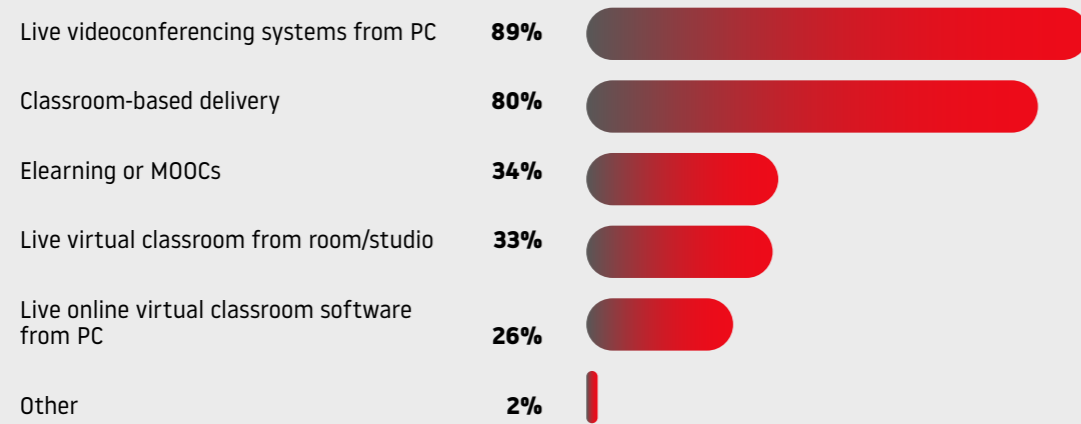
Figure 10. For each type of course taught at your Business School, please select the teaching methods used.
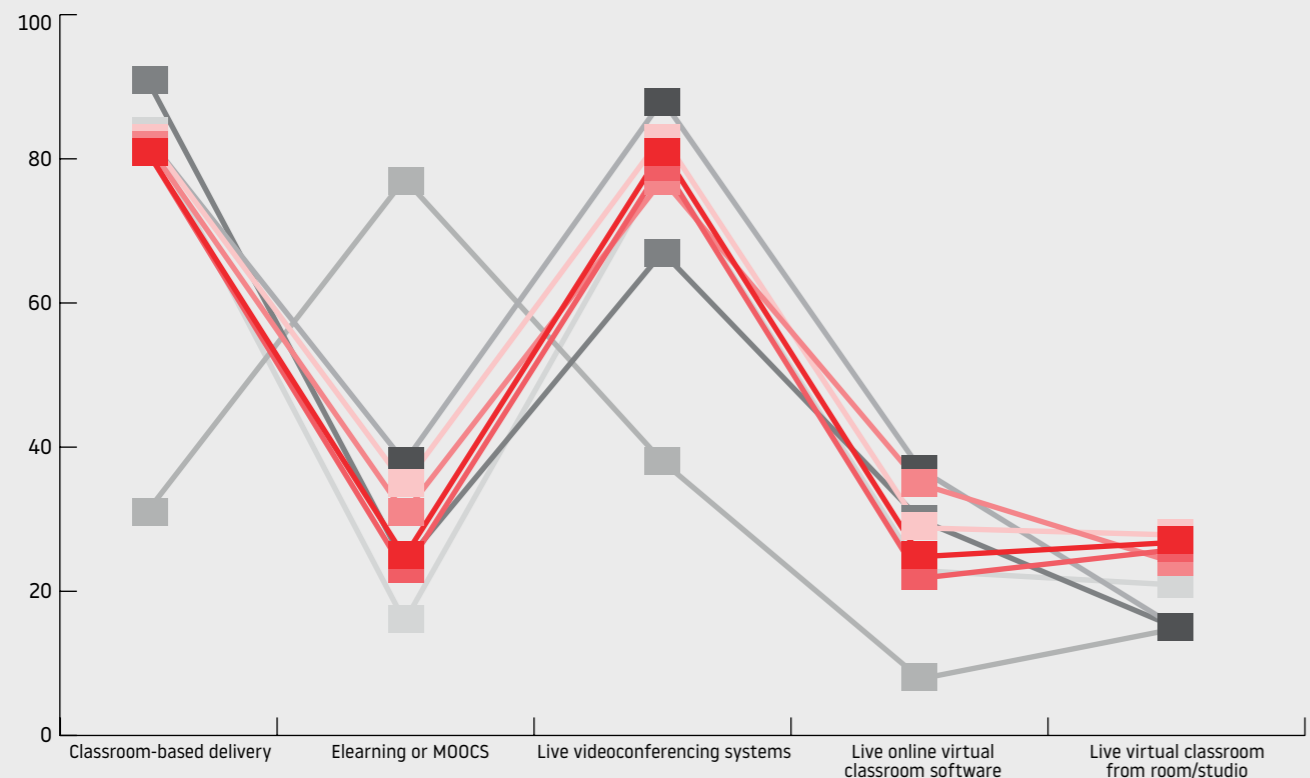
	Classroom-based delivery	Elearning or MOOCS	Live videoconferencing systems	Live online virtual classroom software	Live virtual classroom from room/studio
MBAs	81%	25%	81%	25%	27%
Executive education	81%	23%	79%	22%	26%
Bachelor's degrees	82%	31%	77%	35%	24%
Master's degrees	83%	35%	83%	29%	28%
Master of Science (MSc)	83%	38%	88%	37%	15%
Doctorates	91%	24%	67%	30%	15%
Massive Online Open Courses (MOOCs)	31%	77%	38%	8%	15%
Professional education (tailor-made for companies)	84%	16%	79%	23%	21%

digital teaching methods so be 'somewhat effective' across the board, less than a third believe that digital teaching has been very effective on MBA programmes (28%), and – with the exception of MOOCs – fewer than a quarter of participants believe that digital teaching has been very effective in any other programmes. This suggests further work and development will be required to achieve excellence in digital teaching across the board.

The survey moved on to ask participants about the format of the teaching and learning at their Business Schools.

Considering synchronous versus asynchronous learning, the average Business School analysed conducts 72% of its learning in a synchronous (real time) delivery of its courses; and 32% of its learning in asynchronous formats.

Just under half (48%) of respondents said that their School applies blended learning approaches (where 35% or more of the programme is online, alongside on campus training), although 40% do not use this format and 11% do not know if their School does.

If participants selected 'yes' to using blended learning approaches, they were asked what percentage of blended learning for their Business School's MBA was delivered online. The average answer was 51%.

Considering the use of virtual classrooms to teach any programmes at Business Schools, 51% of Business School leaders polled said they are using virtual classrooms, 39% are not, and 10% do not know.

Survey participants were asked to share further details about the teaching methods their Schools were adopting. The most commonly cited method is live video conferencing systems from PC, which 89% of participants say is being used at their Schools. This was followed by classroom-based delivery (cited by 80% of participants); elearning / MOOCs (34%); live virtual classrooms from studios (33%); and live online virtual classroom software PCs (26%).

Delving deeper, participants were asked to share what programmes at their Schools were using the methods previously outlined and the results are shown in Figure 10. Across most programmes, classroom-based delivery and live video conferencing systems are still the preferred delivery modes for most Business Schools surveyed for this report. More than eight out of 10 respondents are still using classroom-based learning for doctorates (91%), professional or custom education (84%), masters and MSc degrees (83%), bachelor's degrees (82%), MBA programmes (81%), and executive education (81%). However, they have pivoted to using live video conferencing systems to augment classroom-based teaching on MSc degrees (88%), master's degrees (83%), MBA programmes (81%), executive education (79%), and professional and custom education (79%).

You can't just walk into a classroom and 'wing it' like you might do on-campus. You need to think about what students need to learn and how that will happen. It needs to be broken down into manageable chunks and clearly signposted. There need to be clear links between the preparation work you ask students to do, the synchronous sessions and the assessments. Synchronous sessions need to be well structured and designed to be broken up with questions, polls and opportunities that encourage student interaction.

Programme Director, UK

Figure 11. Please rate the effectiveness of each of the teaching methods for each of the types of programmes you offer.
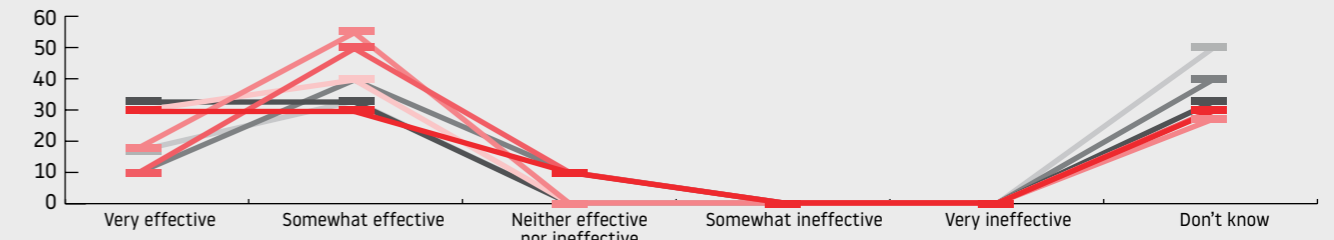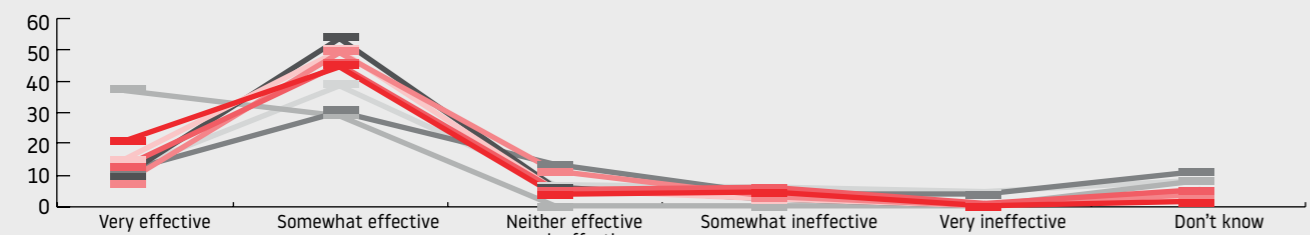
Classroom-based delivery

	Very effective	Somewhat effective	Neither effective nor ineffective	Somewhat ineffective	Very ineffective	Don't know
MBAS	82%	17%	0%	0%	0%	1%
Executive education	77%	18%	1%	1%	0%	2%
Bachelor's degrees	61%	28%	1%	1%	0%	9%
Master's degrees	71%	24%	0%	0%	0%	5%
Master of Science (MSc)	61%	24%	3%	0%	0%	11%
Doctorates	68%	18%	2%	2%	2%	10%
Massive Online Open Courses (MOOCs)	9%	7%	7%	7%	7%	64%

Elearning or MOOCS

	Very effective	Somewhat effective	Neither effective nor ineffective	Somewhat ineffective	Very ineffective	Don't know
MBAS	11%	55%	3%	5%	6%	21%
Executive education	17%	45%	5%	5%	5%	23%
Bachelor's degrees	8%	45%	12%	6%	6%	24%
Master's degrees	9%	55%	9%	4%	4%	20%
Master of Science (MSc)	7%	48%	11%	0%	5%	30%
Doctorates	10%	40%	5%	5%	12%	29%
Massive Online Open Courses (MOOCs)	20%	25%	3%	5%	0%	48%

Live videoconferencing systems

	Very effective	Somewhat effective	Neither effective nor ineffective	Somewhat ineffective	Very ineffective	Don't know
MBAS	31%	62%	3%	2%	0%	1%
Executive education	27%	63%	3%	6%	0%	1%
Bachelor's degrees	25%	56%	6%	5%	2%	6%
Master's degrees	32%	60%	3%	0%	1%	4%
Master of Science (MSc)	25%	60%	6%	2%	0%	8%
Doctorates	24%	51%	8%	8%	0%	8%
Massive Online Open Courses (MOOCs)	15%	24%	3%	6%	0%	52%

Live online virtual classroom software

	Very effective	Somewhat effective	Neither effective nor ineffective	Somewhat ineffective	Very ineffective	Don't know
MBAS	30%	30%	10%	0%	0%	30%
Executive education	10%	50%	10%	0%	0%	30%
Bachelor's degrees	18%	55%	0%	0%	0%	27%
Master's degrees	30%	40%	0%	0%	0%	30%
Master of Science (MSc)	33%	33%	0%	0%	0%	33%
Doctorates	10%	40%	10%	0%	0%	40%
Massive Online Open Courses (MOOCs)	17%	33%	0%	0%	0%	50%

Live virtual classroom from room/studio

	Very effective	Somewhat effective	Neither effective nor ineffective	Somewhat ineffective	Very ineffective	Don't know
MBAS	8%	62%	0%	8%	0%	23%
Executive education	11%	33%	11%	11%	0%	33%
Bachelor's degrees	0%	60%	0%	10%	0%	30%
Master's degrees	0%	56%	0%	11%	0%	33%
Master of Science (MSc)	11%	33%	11%	11%	0%	33%
Doctorates	0%	40%	10%	10%	0%	40%
Massive Online Open Courses (MOOCs)	13%	38%	0%	0%	0%	50%

While the findings indicate that participants have been slower to adopt approaches such as live virtual classroom software when compared to other tech platforms, more than a third are using live online virtual classroom software for MSc programmes (37%) and bachelor's degrees (35%), and a quarter (26%) are using this technology for MBA programmes.

And considering the use of live virtual classrooms from studios, 27% are using this for MBA programmes and 26% have put this technology to use for executive education.

Considering each of the strategies outlined above, participants were asked to rate the effectiveness of the teaching methods against each type of programme they offer. The results, demonstrated in Figure 11, highlight strong perceptions of effectiveness of all the approaches, across the majority of courses.

While, across the board, classroom-based delivery is still deemed to be very effective or somewhat effective by nearly all participants, for all courses, the emerging technologies are also deemed to be somewhat effective and – to a slightly lesser extent – very effective, for all the programmes surveyed as part of this research.

All the various physical and virtual solutions put to survey participants, are deemed to add value to programme delivery, but the findings suggest that for maximum impact and effectiveness, these approaches should be used together to achieve the highest levels of success and student and faculty satisfaction.

Closing off this section of the study, participants were asked if their Schools are planning to invest further in online teaching methods over the coming two years – and 82% said they are planning to invest in technology to enable online teaching; while 18% are not sure or are considering it. No survey participant said they were not intending to invest in online teaching methods.

In the spring we started to use online methods. Before the Covid-19 lockdown, we didn't need to use online methods because our programme is fully stationary. In the spring, we had to first finish some courses which had been started traditionally in the classroom, so we used Microsoft Teams as an experiment. In June we decided to start the programme fully online. We have had to continue that, and I think we will have to do it for the next few months. Most classes now are taught using Teams or using Zoom, they are synchronous courses. All our classes are synchronous.

MBA Director, Poland

SECTION 3: PERCEPTIONS OF ONLINE TECHNOLOGY

Section 3 of the online survey moved to take a deep dive into participants' perceptions of online teaching and learning.

First, participants were asked what they saw as being the biggest advantages of online teaching methods, as well as their perceived challenges and hurdles.

In terms of advantages, Figure 12 shows that 76% of participants believe less travel for students was the biggest advantage of online teaching; 71% value the fact they could record sessions; 71% value the reduction in travel time for staff enabled by online teaching; and 70% think the biggest advantage is international collaboration.

Following this, Business School leaders were surveyed on how they think online teaching methods compare to traditional classroom teaching.

Encouragingly, more than half (52%) believe that online teaching methods are the same as, somewhat better, or much better than traditional classroom teaching. In fact a quarter (25%) went so far as to say that online teaching methods were better than traditional classroom-based teaching.

But a significant 48%, admitted online teaching methods were somewhat worse than a traditional classroom experience. No participants said online teaching was much worse, but the findings suggest that more work may be needed to enhance digital delivery and convince this notable minority of Business School leaders that it can provide the same quality of experience as the classroom.

Participants were asked: 'What size of class does your School's online teaching work best with?' The mean answer was 37, suggesting that class sizes might need to be reduced to allow for online teaching success, especially in light of the fact that the mean MBA cohort among Schools that participated in this research is 265.

Moving on the survey asked about challenges participants have been experiencing with online education and then with online teaching in particular. These are outlined in Figures 14, 15 and 16.

> The ability to have faculty or guests from the other side of the world in your class is amazing. The opportunity cost is much lower for outside participants.
>
> **MBA Director, South Africa**

Figure 12. What do you see as being the biggest advantages of using online teaching methods?

Less travel for students	76%
Being able to record the sessions	71%
Less travel for staff	71%
International collaboration	70%
Social distancing	67%
Ability to have more diverse student cohorts	54%
Being able to grow your cohort	38%
Being able to use measurement metrics	30%
Other (please specify)	9%
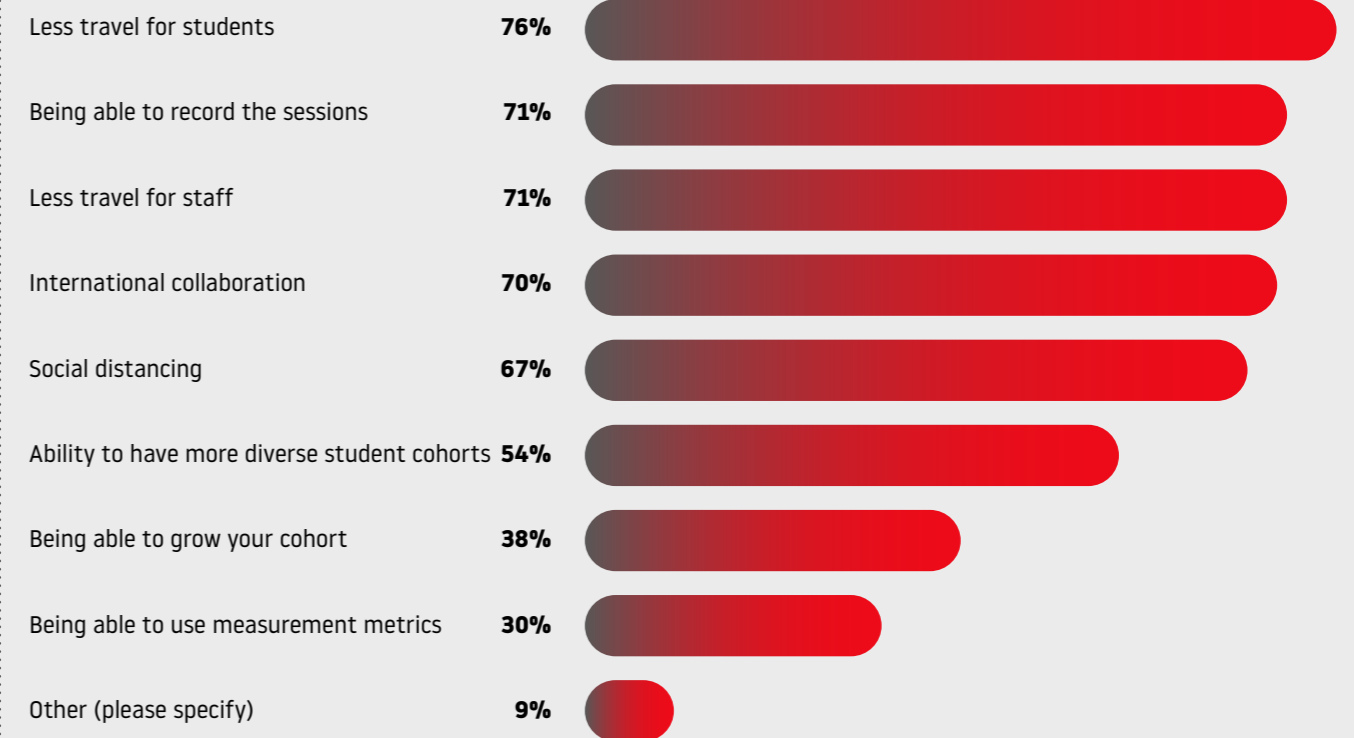
Figure 13. In your opinion, how do online teaching methods compare to the traditional classroom teaching experience?

- Much better **3%**
- Somewhat better **22%**
- The same **27%**
- Somewhat worse **48%**
- Much worse **0%**
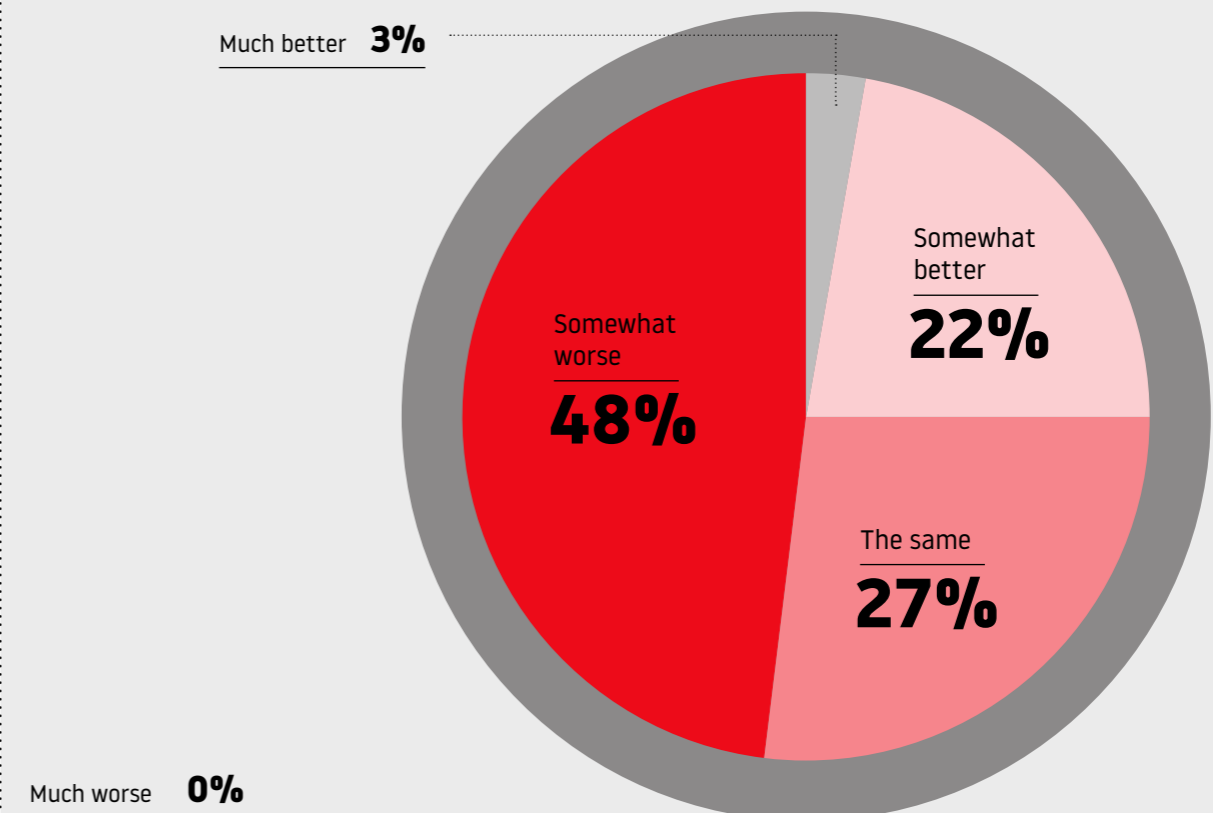
Figure 14. What are the challenges you have experienced while delivering online education?
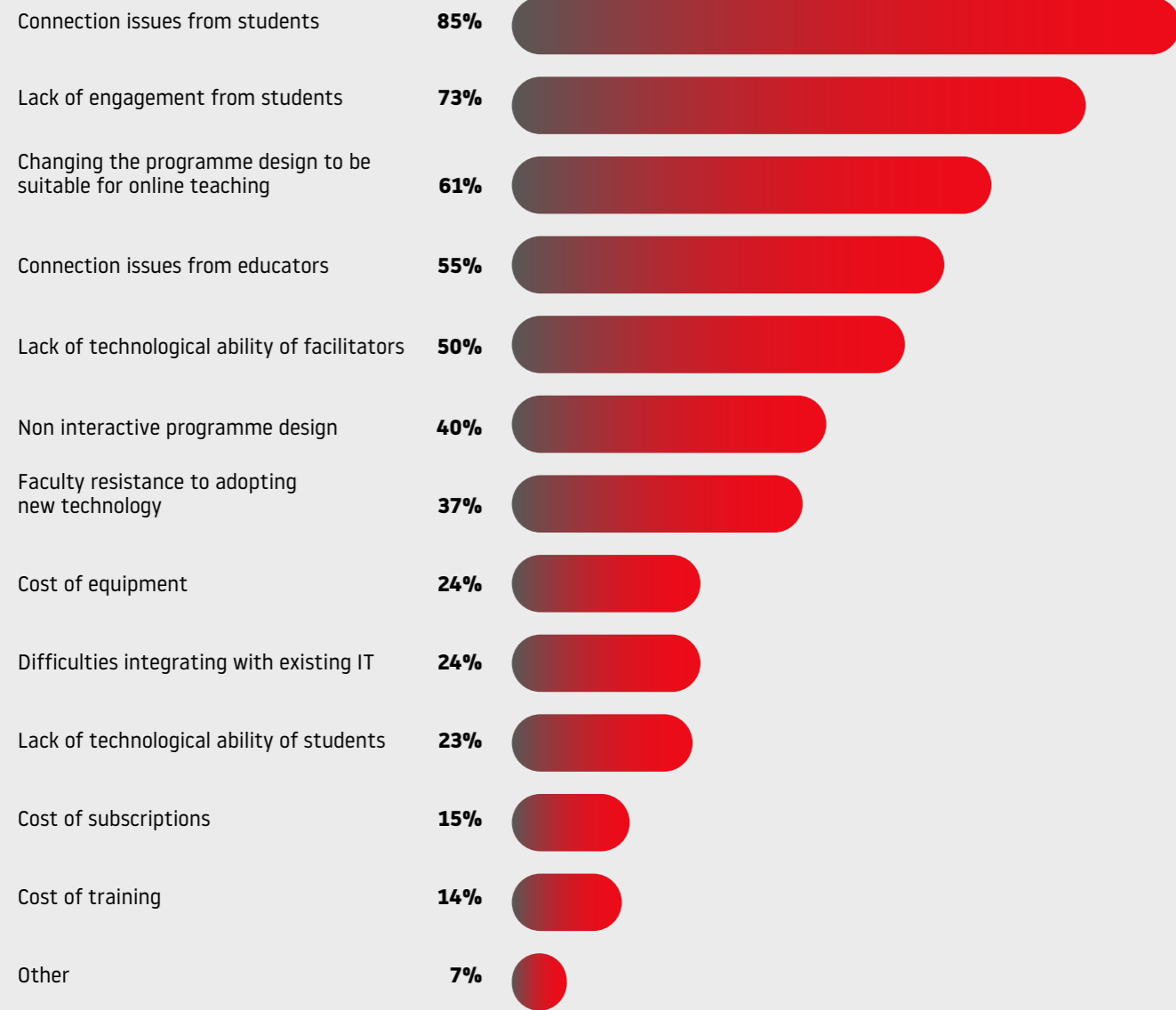
Challenge	%
Connection issues from students	85%
Lack of engagement from students	73%
Changing the programme design to be suitable for online teaching	61%
Connection issues from educators	55%
Lack of technological ability of facilitators	50%
Non interactive programme design	40%
Faculty resistance to adopting new technology	37%
Cost of equipment	24%
Difficulties integrating with existing IT	24%
Lack of technological ability of students	23%
Cost of subscriptions	15%
Cost of training	14%
Other	7%

The major challenges faced by Business School leaders when delivering online education include connection issues from students (cited by 85% of respondents); lack of student engagement (73%); changing the design of programmes to make them suitable for students; and connection issues from educators (55%).

Just 15% of Business School leaders see the cost of subscriptions as a challenge; and 14% think the cost of training is a challenge at their School when delivering online education.

Those that answered this question were invited to suggest other challenging areas at their Schools and answers included relationship building with cohorts, examinations, and difficulties integrating new systems with existing IT infrastructure.

Considering online teaching in particular, transforming courses to fit an online format causes a problem for almost three quarters of Business School leaders (73%). Other problems frequently cited by survey participants include gaining feedback from students on their understanding (cited by 52% of respondents). When asked to put forward other problems answers from participants focused on difficult in maintaining student engagement and interaction.

> The most important challenge or inconvenience for professors is not technologically based. It is how to keep control ov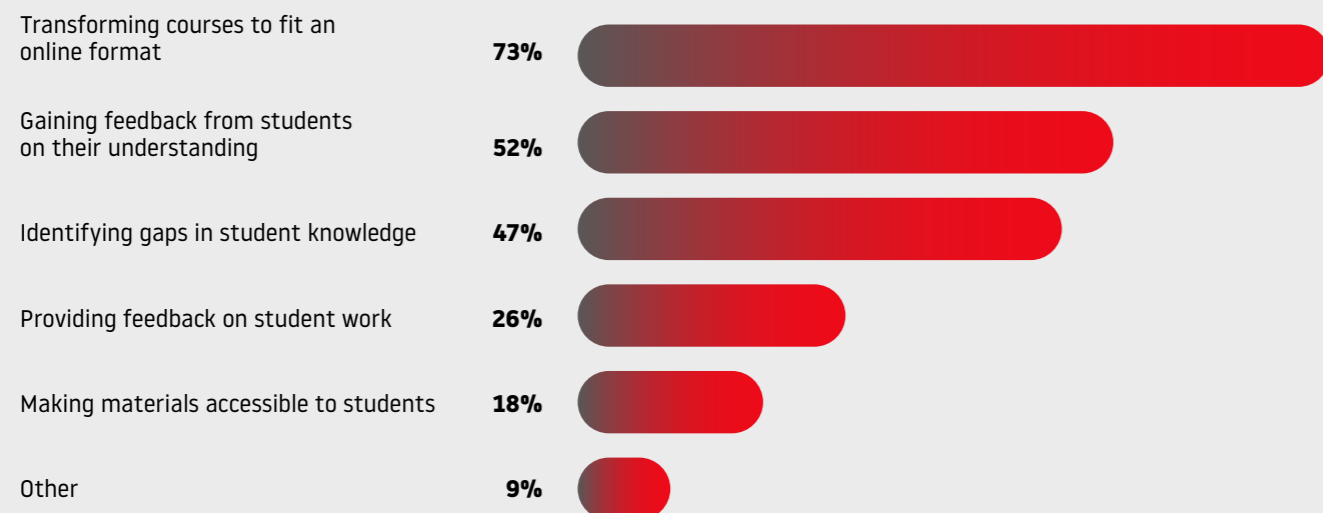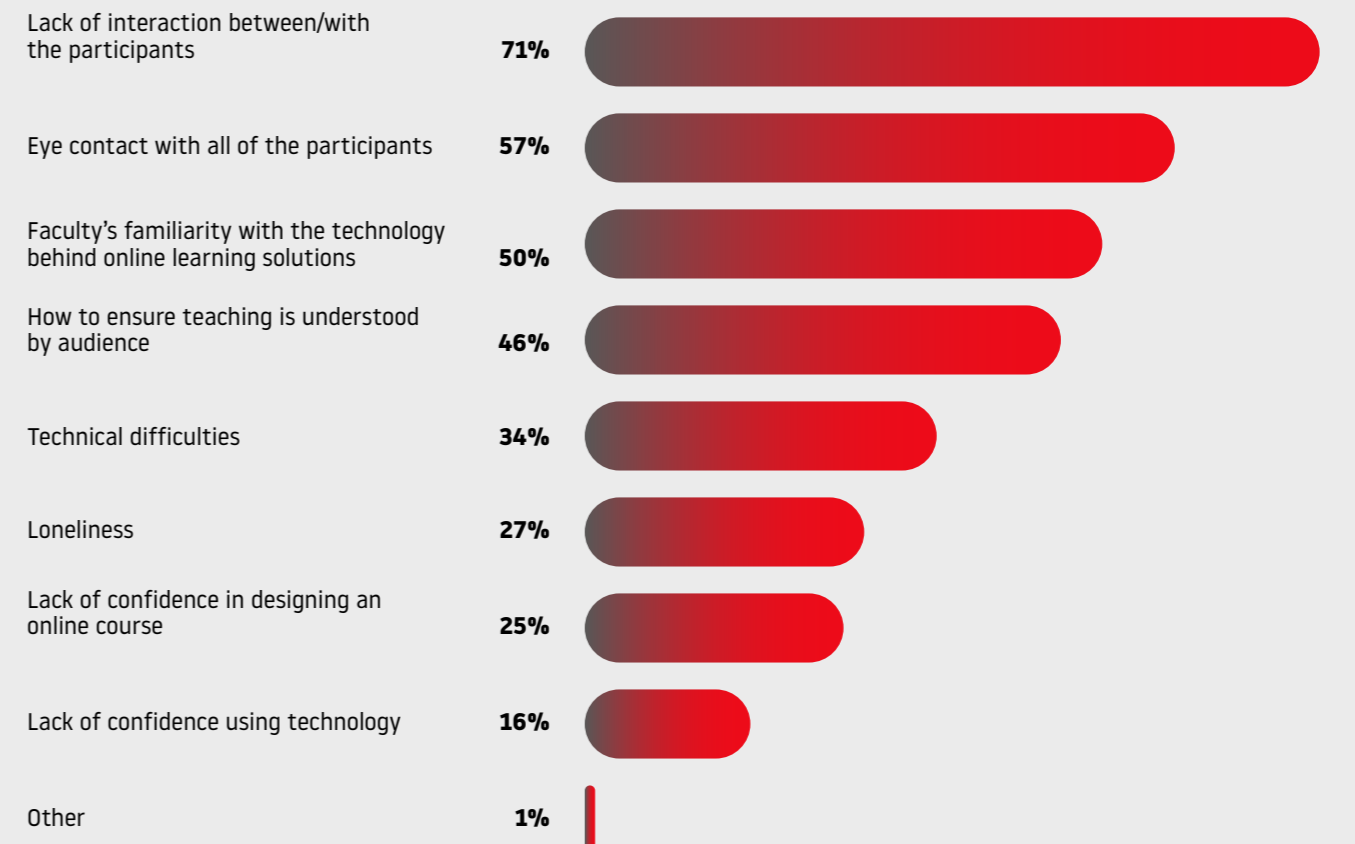er the group, not control for the sake of controlling people but control for the sake of learning experience. Our classroom courses were about 20 to 25 people in the room sometimes 30, no more than that. A few well-regarded professors, famous professors, teach classes in very large classrooms like 50 or 60 people in the classroom but most of us were teaching classes in rooms for 20 to 25 people.
>
> **Dean, Mexico**

Figure 15. When using online teaching in what areas do you experience problems?

Area	%
Transforming courses to fit an online format	73%
Gaining feedback from students on their understanding	52%
Identifying gaps in student knowledge	47%
Providing feedback on student work	26%
Making materials accessible to students	18%
Other	9%

Figure 16. What are the top three challenges faculty are facing when teaching online?

Challenge	%
Lack of interaction between/with the participants	71%
Eye contact with all of the participants	57%
Faculty's familiarity with the technology behind online learning solutions	50%
How to ensure teaching is understood by audience	46%
Technical difficulties	34%
Loneliness	27%
Lack of confidence in designing an online course	25%
Lack of confidence using technology	16%
Other	1%

Less than two out of 10 Business School leaders (18%) find making materials accessible to students as being problematic when using online teaching.

In terms of feedback from faculty, survey participants were asked to put forward challenges their colleagues had brought to their attention, having taught online. More than seven out of 10 (71%) cited lack of interaction; 57% cited lack of eye contact with students; and 50% suggested that a problem was faculty's lack of familiarity with the technology behind online learning solutions.

The survey asked participants to rate the effectiveness of technology in delivering Business School initiatives outside of the core area of teaching.

Here satisfaction scores were lower, with almost half (45%) saying that technology was ineffective at delivering networking opportunities; 39% of the belief that online was ineffective in soft skills development; and 37% saying technology had not been effective at delivering wellbeing initiatives for students in their institutions.

Conversely, almost nine out of 10 Business School leaders (87%) said online technology was either somewhat or very effective in delivering flexibility in learning; more than two thirds (67%) rated the effectiveness of online technology in supporting team projects and collaboration; and 51% said it was somewhat or very effective in enabling two-way discussions between facilitators and students.

Overall Business School leaders believe their facilitator and faculty colleagues were confident in using online teaching technology: 11% said their facilitators and faculty were very confident; and 78% said they were fairly confident. Just 12% said faculty and facilitators at their Schools were not confident.
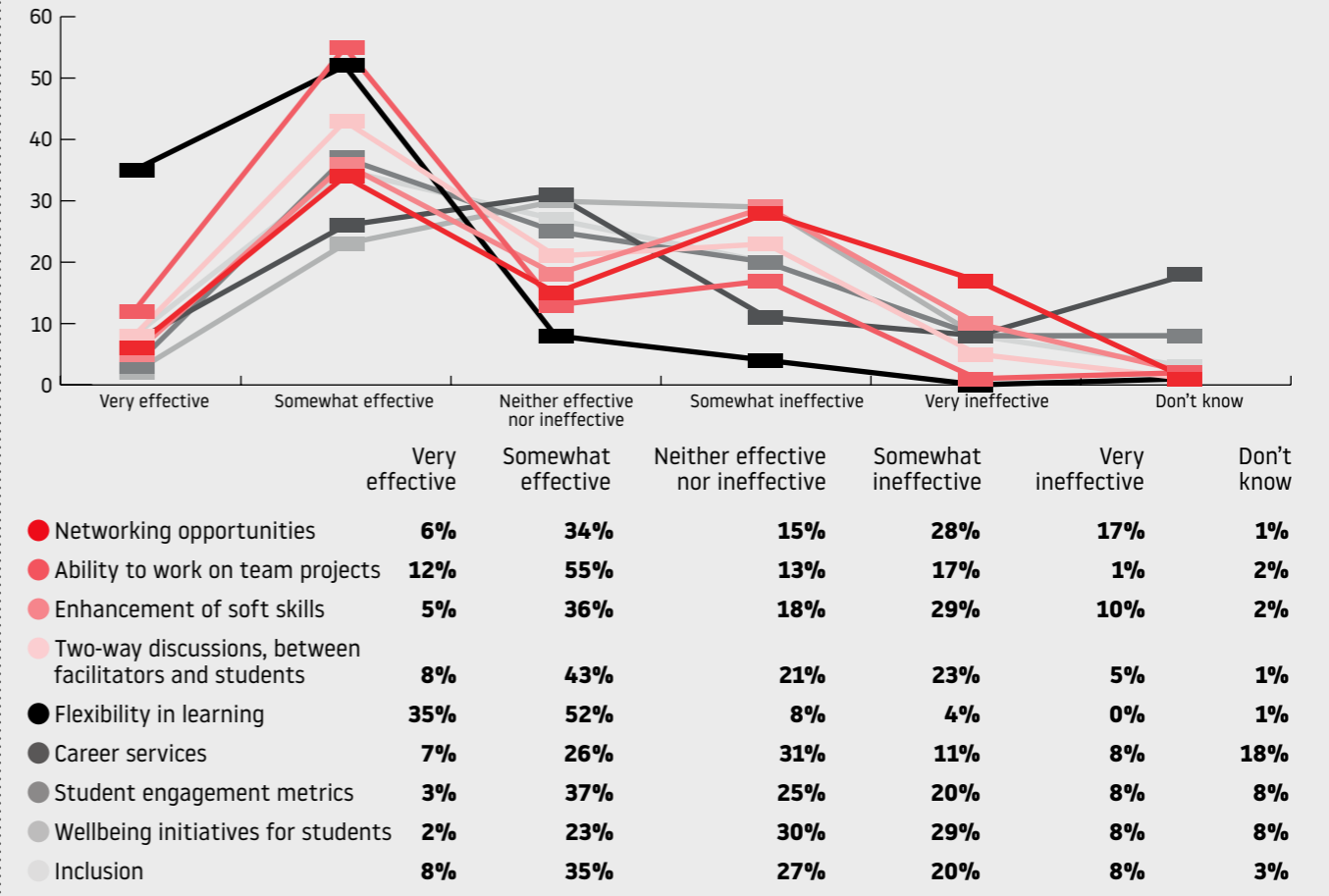
Student experience was outlined several times in the survey as being a key factor of consideration in terms of online learning provision, so participants were asked what they deem to add the most to student experience when delivering courses online.

Almost seven out of 10 Business School leaders (69%) believe the ability for students to have break-out sessions adds value; followed by the ability to have instant live interactions with faculty (64%) and interactive quizzes and polls (63%). Aspects such as engagement metrics and the ability to choose the feed the student wants were deemed less valuable by the survey sample (with 14% and 11% citing these as valuable respectively).
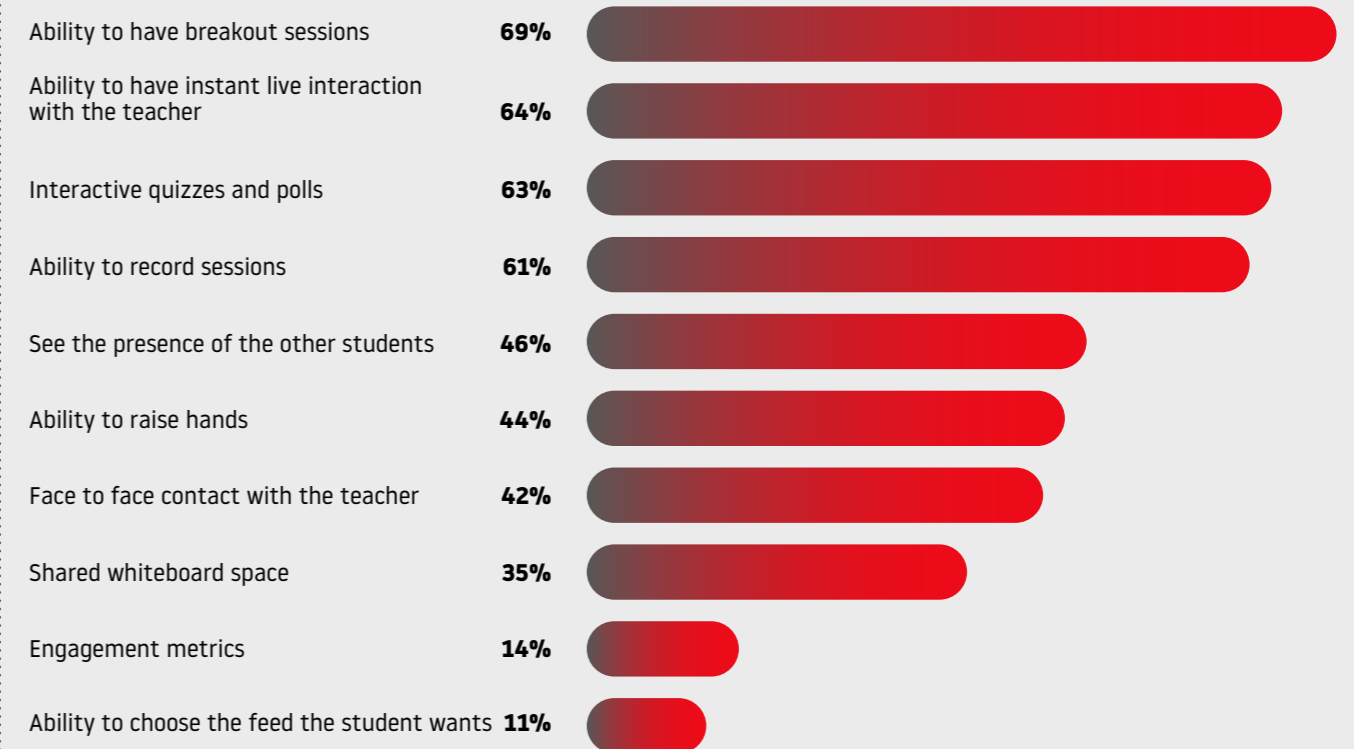
Now online, most of the groups are below 20. But even at 20 you experience a sensation that the class, a part of the class is not there, they're doing something else. Or they are there but they are using the time for doing other things except from being concentrated on the class. They realised that when they measure the performance of the class, many students don't know even the basic concepts or content that was taught in the class during the semester. So that is the main problem.

Dean, Mexico

Figure 17. How effective do you believe online learning technologies used at your School have been in terms of delivering the following:

	Very effective	Somewhat effective	Neither effective nor ineffective	Somewhat ineffective	Very ineffective	Don't know
Networking opportunities	6%	34%	15%	28%	17%	1%
Ability to work on team projects	12%	55%	13%	17%	1%	2%
Enhancement of soft skills	5%	36%	18%	29%	10%	2%
Two-way discussions, between facilitators and students	8%	43%	21%	23%	5%	1%
Flexibility in learning	35%	52%	8%	4%	0%	1%
Career services	7%	26%	31%	11%	8%	18%
Student engagement metrics	3%	37%	25%	20%	8%	8%
Wellbeing initiatives for students	2%	23%	30%	29%	8%	8%
Inclusion	8%	35%	27%	20%	8%	3%

Figure 18. What do you believe adds the most to student experience when delivering courses online?

Ability to have breakout sessions	69%
Ability to have instant live interaction with the teacher	64%
Interactive quizzes and polls	63%
Ability to record sessions	61%
See the presence of the other students	46%
Ability to raise hands	44%
Face to face contact with the teacher	42%
Shared whiteboard space	35%
Engagement metrics	14%
Ability to choose the feed the student wants	11%

Figure 19. In comparison with other Business Schools in your country / region, how would you rate your Business School's online teaching ability?

Don't know **2%**
Fairly poor **2%**
Neither good nor poor **5%**
Fairly good **22%**
Excellent **26%**
Very good **43%**
Terrible **0%**
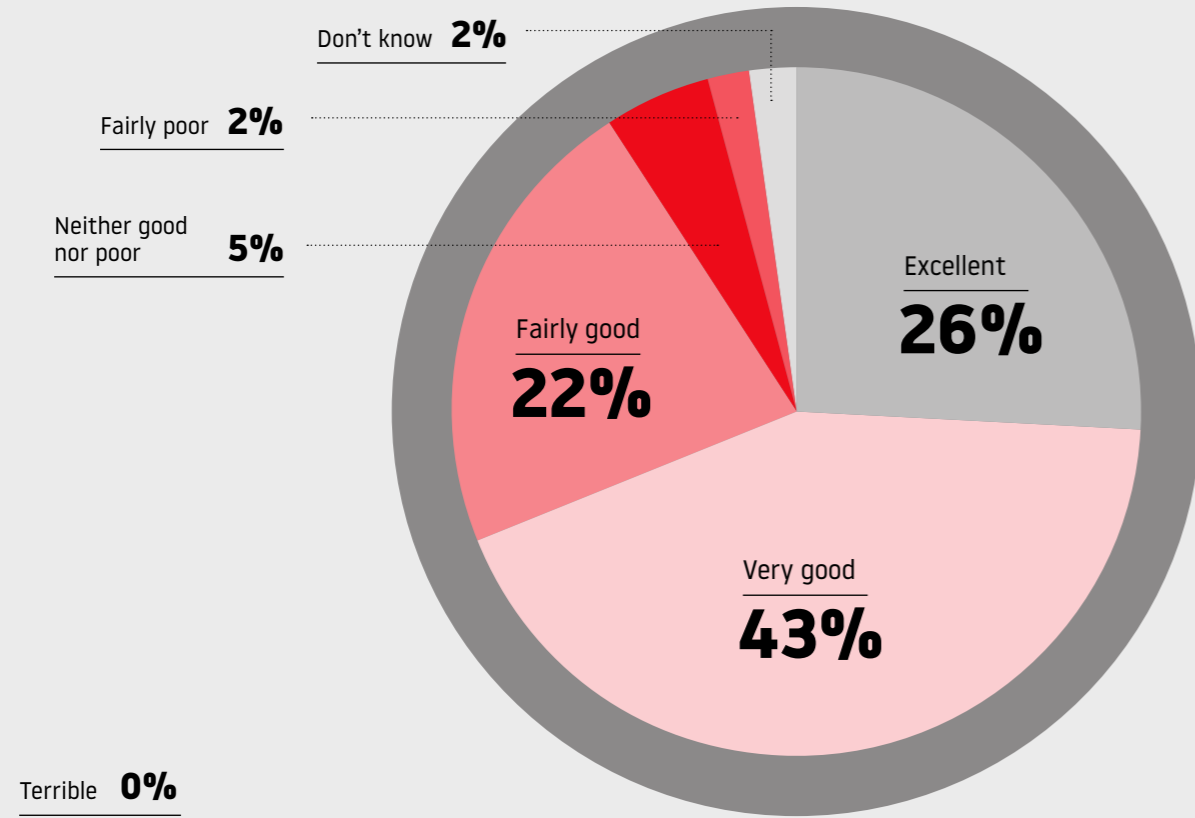
Survey respondents were prompted to consider the success of their education technology strategy in comparison to their peers and competitors – and in the eyes of their students.

When asked to rate how effective their Business Schools are in comparison with other Schools in their regions, leaders remain confident they are remaining leading edge. In comparison to other Schools in their regions. A very substantial 91% of participants think their School is either excellent, very good or fairly good at their online teaching capability. More than a quarter (26%) of participants define themselves as excellent in terms of online teaching ability compared with other local Schools.
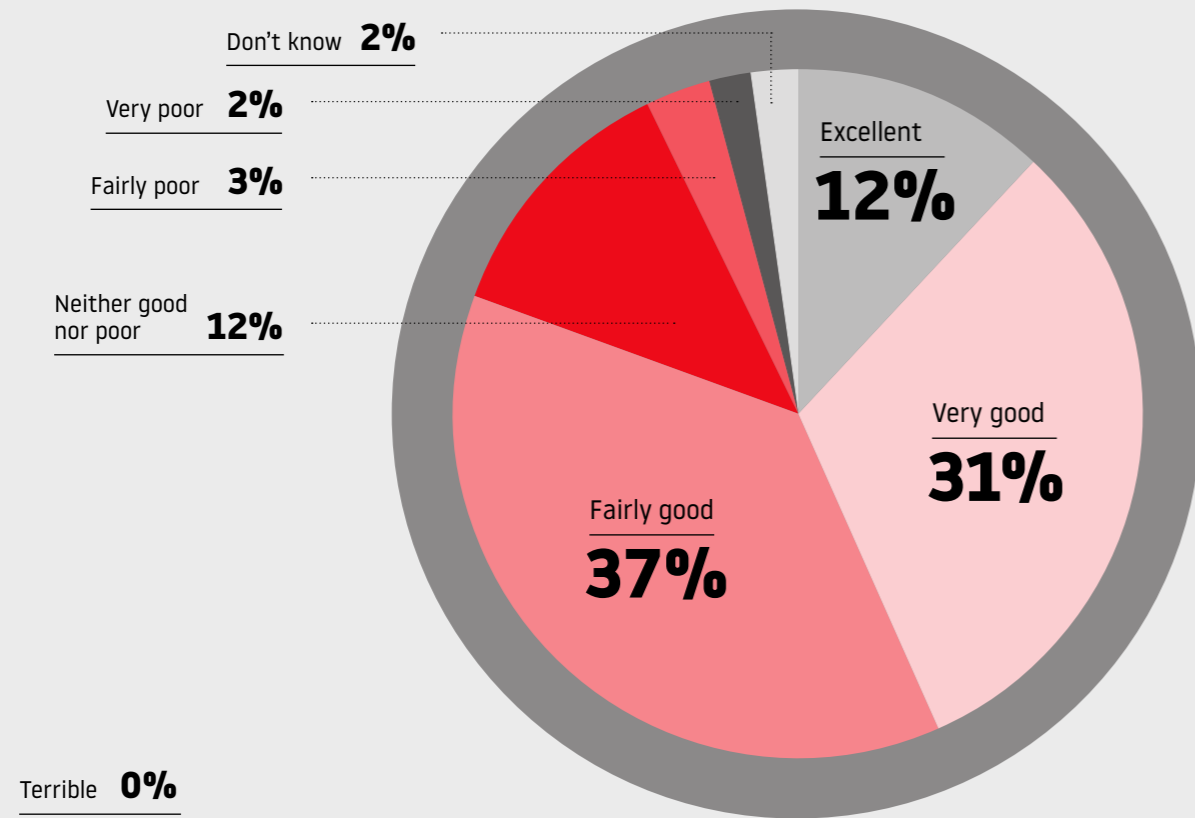
Looking to the wider arena, Business School leaders polled are slightly less confident, when comparing themselves to international institutions in terms of their online teaching ability. Just 12% believe they are excellent in comparison to their international peers, however collectively 80% categorise themselves as either excellent, very good or fairly good at their online teaching ability, when comparing themselves to Schools globally.

The final question in this section encouraged Business School leaders to reflect on how their students' expectations are met with their delivery of online learning – and the vast majority (87%), think they are doing very well or fairly well in the eyes of their cohorts.

I've been surprised with certain aspects. For example, in my delivery, I did some pre-recorded lectures, 20 minutes talking about theory and then you can set up a group discussion. You talk about four theories, four groups and each group has a separate theory, and then they have to apply it to work experience. The lectures then start with the groups feeding back. It's the synchronised online sessions which are more owned by the students, kind of thing and they do that work independently. I've been surprised at how valuable the students found the pre-recorded lectures segments and that's both with executive MBAs and full-time students.

Programme Director, UK

Figure 20. In comparison to Business Schools globally, how would you rate your Business School's online teaching ability?

Don't know **2%**
Very poor **2%**
Fairly poor **3%**
Neither good nor poor **12%**
Excellent **12%**
Very good **31%**
Fairly good **37%**
Terrible **0%**

Figure 21. How well do believe online learning capabilities at your Business School match your students' expectations of online learning?

Don't know **2%**
Not at all well **1%**
Not very well **10%**
Very well **15%**
Fairly well **72%**
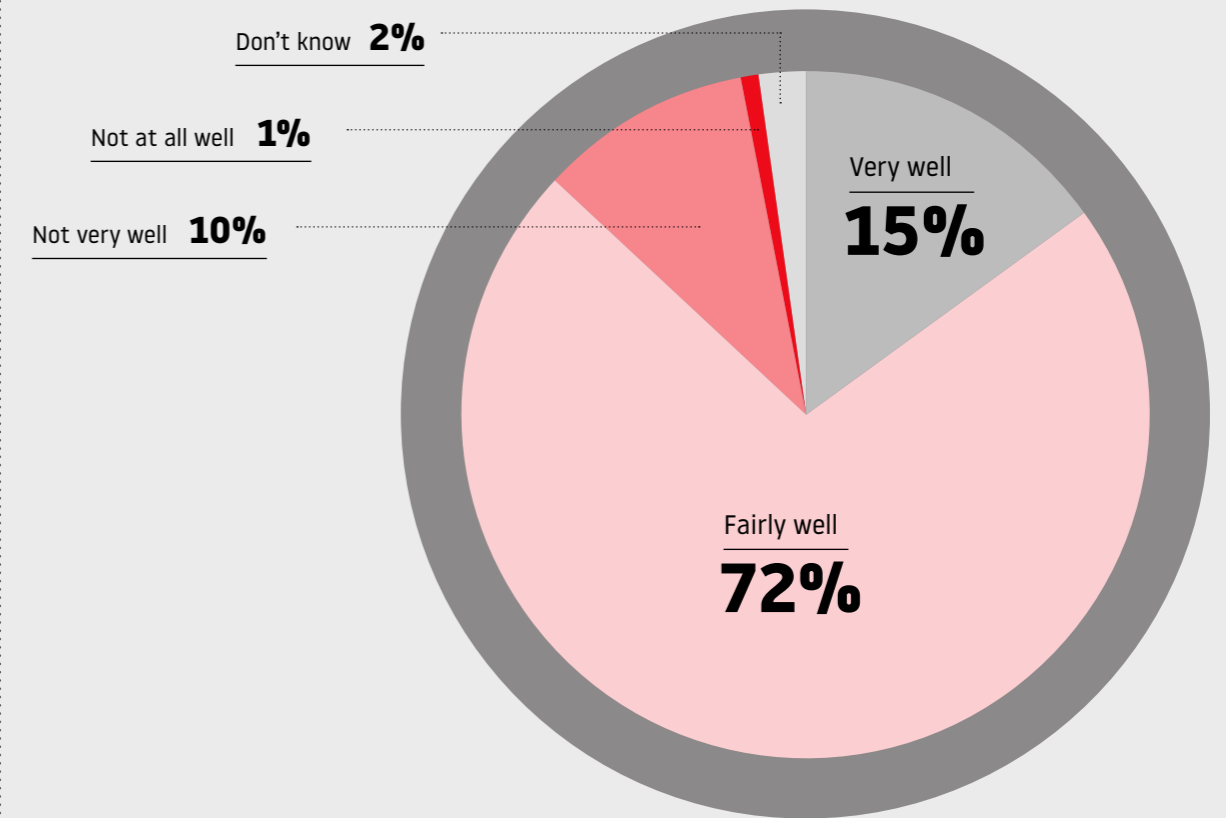
SECTION 4: TECHNOLOGY'S RELATIONSHIP WITH THE WIDER LEARNING ECOSYSTEM

In the ultimate section of the survey, participants were prompted to consider technology and its impact on teaching and learning at Business Schools in general, both now and in the future.

Looking to the future, participants were asked what they thought would be the most prevalent forms of teaching for various types of programmes in their Schools in five years' time.

As Figure 22 illustrates, with the exception of MOOCs, very small numbers of participants thought that any of the 'traditional' Business School programmes would move into fully online delivery. However, Business School leaders predict that blended and hybrid models will replace the traditional classroom-based delivery of courses in the short-to-medium term.

Highlighting the MBA programme as a case in point – just 21% of leaders think this programme will be taught in a traditional classroom format in five years, while 38% believe blended delivery will be the most prevalent form of teaching; and 38% predict a hybrid approach.
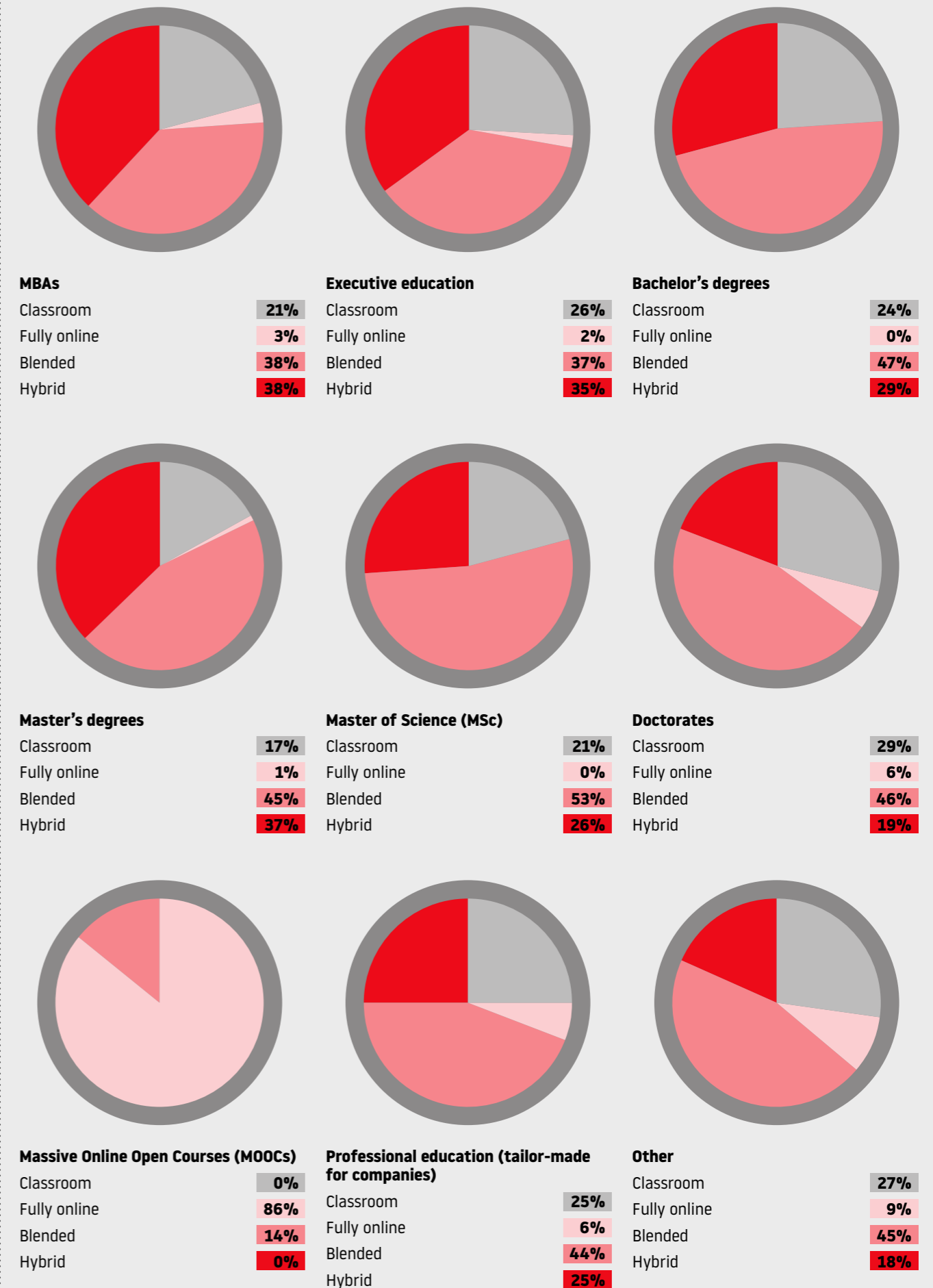
Taking a slightly longer-term view, as outlined in Figure 23, participants considered the technological concepts and innovations that would impact the running of their Schools in the coming decade. When considering AI, big data, automation, digitalisation, data visualisation, and engagement analytics, it is definitive that no participants think these factors will be of zero importance to Business School strategy.

Digitalisation is deemed to be the most important concept in the running of the Business School of the next 10 years, with almost two thirds of leaders that took the survey (63%) believing it to be very important. Big data was the next most cited concepts with 58% believing it to be very important for the Business School of tomorrow.
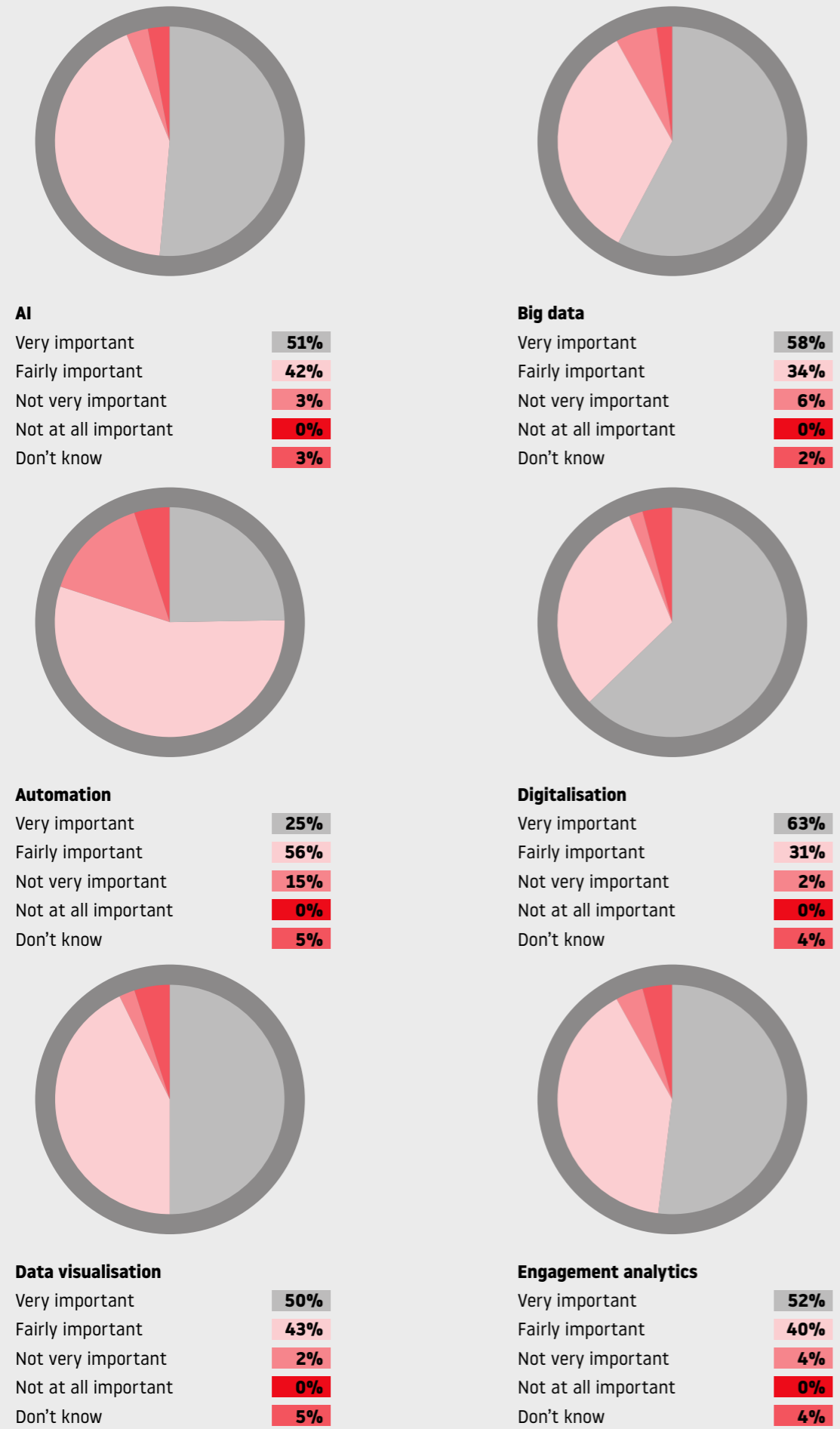
I'm not sure the basic content of the MBA will change radically – we might see a bit more of crisis or risk management for a while, and data analytics and sustainability will continue as emerging themes as well as, perhaps, diversity and inclusion. But people still do an MBA to get a general grounding in management that will support them in more senior level roles.

Programme Director, UK

Figure 22. What do you think will be the most prevalent form of teaching in each of the following types of programme in the next five years?

MBAs
Classroom	21%
Fully online	3%
Blended	38%
Hybrid	38%

Executive education
Classroom	26%
Fully online	2%
Blended	37%
Hybrid	35%

Bachelor's degrees
Classroom	24%
Fully online	0%
Blended	47%
Hybrid	29%

Master's degrees
Classroom	17%
Fully online	1%
Blended	45%
Hybrid	37%

Master of Science (MSc)
Classroom	21%
Fully online	0%
Blended	53%
Hybrid	26%

Doctorates
Classroom	29%
Fully online	6%
Blended	46%
Hybrid	19%

Massive Online Open Courses (MOOCs)
Classroom	0%
Fully online	86%
Blended	14%
Hybrid	0%

Professional education (tailor-made for companies)
Classroom	25%
Fully online	6%
Blended	44%
Hybrid	25%

Other
Classroom	27%
Fully online	9%
Blended	45%
Hybrid	18%

Figure 23. How important do you consider the following technological concepts to be in the running of Business Schools in the next 10 years?

AI

Very important	51%
Fairly important	42%
Not very important	3%
Not at all important	0%
Don't know	3%

Big data

Very important	58%
Fairly important	34%
Not very important	6%
Not at all important	0%
Don't know	2%

Automation

Very important	25%
Fairly important	56%
Not very important	15%
Not at all important	0%
Don't know	5%

Digitalisation

Very important	63%
Fairly important	31%
Not very important	2%
Not at all important	0%
Don't know	4%

Data visualisation

Very important	50%
Fairly important	43%
Not very important	2%
Not at all important	0%
Don't know	5%

Engagement analytics

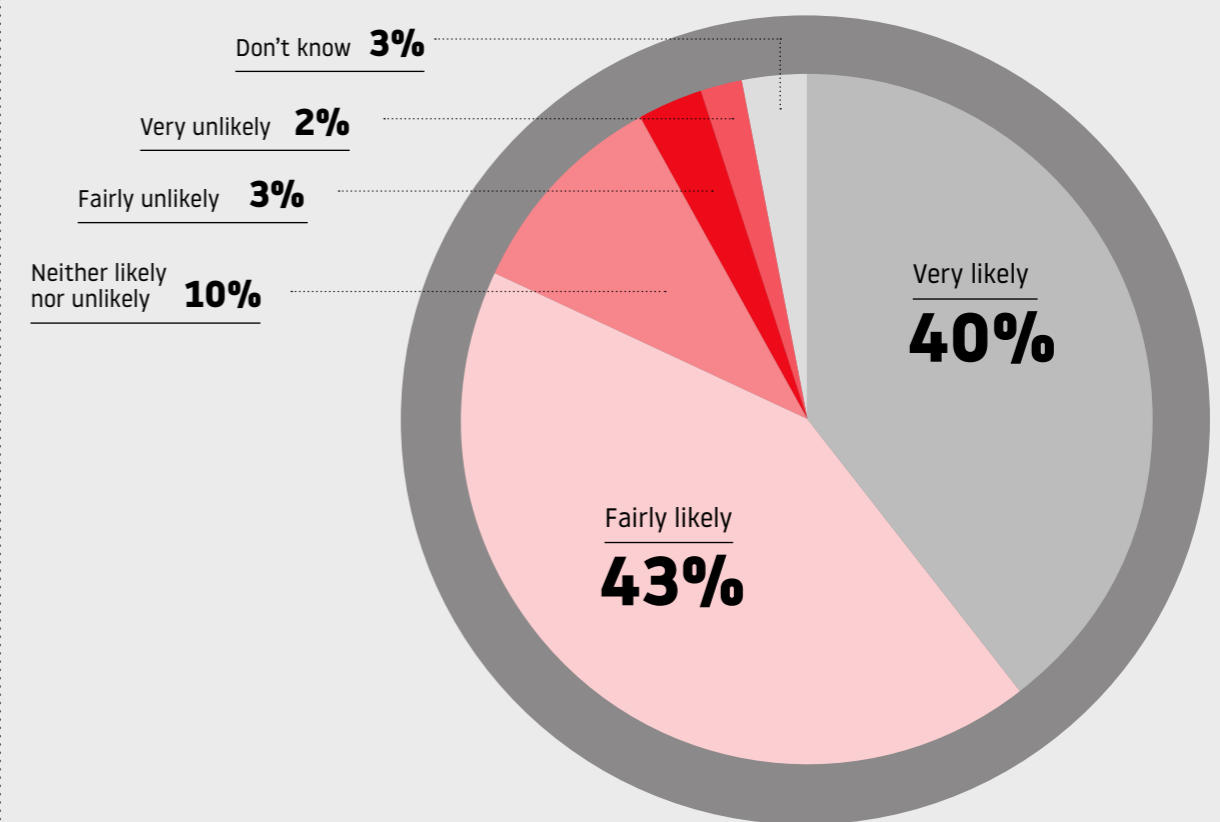|	
Very important	52%
Fairly important	40%
Not very important	4%
Not at all important	0%
Don't know	4%

In late 2019, in another AMBA & BGA study, Business School leaders were asked how likely they believed it was that the fundamentals of the MBA would change in the next 10 years. Pre-Covid-19, 77% of this sample said that was either very likely or fairly likely.

To finish off the 2020 questionnaire, the same question was posed to participants, and the proportion that believe in the likelihood of a fundamental change in the MBA has increased by seven percentage points to 83%, as outlined in Figure 24. A mere 2% still believe that it's very unlikely that the fundamentals of the MBA will change, in light of unprecedented disruption to the business education sector.

> It is a total transformation. If we stick to tradition just for the sake of tradition, it is not good enough. We have to keep what is good for humanity and say 'goodbye' to everything else. We need more flexibility in the curriculum, more flexibility in the teaching mode, and also more independence for Schools in teaching MBAs without a rigid model, and this will come to be more certain than not.
>
> **Dean, Mexico**

Figure 24. How likely or unlikely is it that the fundamentals of an MBA will change in the next 10 years?

Don't know **3%**

Very unlikely **2%**

Fairly unlikely **3%**

Neither likely nor unlikely **10%**

Very likely **40%**

Fairly likely **43%**

The Business School leaders who completed the questionnaire for this research and the Deans and MBA directors that took part in the qualitative interviews have shown their Schools to have been both pragmatic and agile in the face of the disruption caused by 2020.

While they have all initially been reactive to the need for fast tech adoption in the face of social distancing; they ascertained challenges quickly and moved to address them with innovative strategies and problem solving moving forward.

The next steps for Business School leaders across the world is to move from crisis mode to further innovation to develop and finesse their tech strategy as we move forward into the recovery as vaccines reduce the impact of the coronavirus and Covid-19.

The findings illustrate that 91% of Business School leaders have increased the amount of digital or online learning opportunities since February 2020, and online course delivery shot up from 8% pre-Covid-19 to 68% during the pandemic.

Encouragingly nearly all of the Business School leaders we polled (98%) believe their School was either very successful or fairly successful in taking programmes online due to Covid-19; and 88% of Business School leaders believe the effectiveness of digital teaching on the MBA programmes at their Schools to have been either very effective, or somewhat effective.

All the Business School leaders we surveyed had either already assigned budget to further tech enhancement, or were considering this for the future, which highlights their need for further development as well as their ambition for ongoing innovation in delivery.

Considering pain points, 48% of our participants admitted online teaching methods were somewhat worse than a classroom experience – however just over half think the delivery is comparable to the traditional format of teaching, highlighting reduction in travel times, international collaboration and the opportunity to record sessions easily as being particularly advantageous, when using online delivery.

The major challenges faced by Business School leaders when delivering online education include connection issues from students (cited by 85% of respondents); lack of student engagement (73%); changing the design of programmes to make them suitable for students; and connection issues from educators (55%). Three quarters (73%) of Business School leaders believe the biggest problem with online teaching is transforming courses to fit an online format. Other problems frequently cited by survey participants include gaining feedback from students on their understanding (cited by 52% of respondents).

These issues, when raised, could be quickly and easily rectified with training, stronger network connections, and strategic collaboration with technology providers to ascertain hurdles fast, and address them proportionately.

Business School leaders understandably predict that blended and hybrid models will replace the traditional classroom-based delivery of courses in the next five years – and, as such, this is where their planning time and budget will be allocated in the medium term.

Digitalisation is deemed to be the most important concept in the running of the Business School of the next 10 years, with almost two thirds of leaders (63%) believing it to be very important. And a whopping 83% of leaders think it is either very likely or fairly likely that the fundamentals of the MBA will change in the next 10 years, compared with 77% who were of this opinion in late 2019.

The overarching take-away from this research is that things will never be the same as they were pre-Covid-19. A new era, we'd previously debated and considered, has arrived almost overnight.