Advance HE

On the Horizon

An Advance HE report on the challenges for learning and teaching in global higher education over the next five to ten years

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1. Introduction

This report focuses on the perceptions of change and challenge for the learning and teaching agenda in higher education (HE) providers around the world over the next five to ten years. We use 'perceptions' here because the method used for collecting the views presented in the report was to interview a selection of people with executive or senior leadership roles in both the UK and overseas about the challenges they believed they would be facing in their institutions, and elsewhere.[1] Most of our interviewees share a broadly common view of a future landscape for learning and teaching in which the prospects for funding, technology, access, student expectations, the academic workforce, the pace of change, and the learning environment all loom large. At the same time, they have richly differentiated understandings of how these challenges might manifest, how to deal with them, and what priorities should be established.

A definitive report on these matters is not possible: predictions can never be definitive, as some of our participants firmly noted, and the sample size and processing time required for such an epithet to be applied would be unmanageably extensive. So this is an indicative, synchronic analysis – a taking of the pulse in the UK and a number of other countries – which reveals the common hopes and concerns shared by those whose primary focus is on the educational benefits to be realised for future generations of students.

Institutions have become used to successive planning cycles wherein each seems more challenging than the last, and the pace of change and intensity of turbulence increase with no plateaus in sight. The predominant view of the future HE landscape shared by our participants is characterised by this steepening gradient of change which has become the new normal. In most organisations the highly tuned machinery of strategic planning - data analysis, demographics, financial planning, risk assessments, market positioning - has geared up to unprecedented activity levels. Yet amidst all this, it is remarkable how little space, relatively speaking, has been given over the last decade or so to detailed and rigorous examination of how we teach, how and what students learn, and what the outcomes might be. The internal industries of universities have been proportionally heavily weighted towards organisational processes, regulatory concerns, the business of governance, and when it comes to the academic portfolio, research. A number of our participants commented on this imbalance, but also noted how times are changing, as learning and teaching and the student experience are moving sharply up the agenda as key priorities. Student analytics are rapidly improving and becoming more sophisticated; evidence of how students learn can now be extrapolated from large sample sources, producing further evidence on which more secure foundations for innovations in learning and teaching can be built. Some also report rapid and substantial progress in their institutions in the understanding of the education portfolio as being of increasingly central

[1] See Annex 1 for details

importance and effectively setting the agenda for other key strategies. We believe this report might contribute to this momentum if it succeeds in encouraging further discussion and dialogue within institutions and across the sector. To facilitate this, the sections that follow are headed up by questions and topics raised by participants or emerging in the discussion itself.

2. Is this the beginning of the epoch in which technology changes everything?

This was the question at the front of most participants' minds, and it occurred in every interview in one form or another. At the same time, there were a series of different accounts of the opportunities and threats of technology, and there was also some caution about exaggerating the pace and scale of change. The academic world is mindful of the well-rehearsed quotation from John L. Hennessy about MOOCs made in 2012 ('A Tsunami is coming') which has not (yet) manifested, and mindful too that most recent technological revolutions have not snuffed out predecessor media, but complemented and expanded their capacities in unpredicted ways. For some, the innovations of technology present a primary challenge of 'keeping up': the pace of change is simply too fast and various for many staff. For others, new and developing technologies – most notably Artificial Intelligence (AI) – will fundamentally change what we do in universities, and indeed, the economies in which graduates will be employed.

'Keeping up' is clearly a major worry, but more than one of our contributors warned against seeing students as digital natives and academic staff as dinosaurs. Casual stereotypes do not work well in this paradigm: more personalised computing through social media for young people offers more scope for idiosyncrasy and inconsistency in computer literacy; numbers of academic staff are innovating teaching by adopting new technologies. Even so, the repeated concerns are that the appetite for change in the academic workforce is not broadly developed or acute, that innovators are often working on their own or in small groups, and that technological momentum is accelerating faster than the capacity to use it. A generally conservative culture is seen by most to be still prevalent, not necessarily just because some staff are declining to adopt new technology, but also because when adopted its place is largely supplementary: either it does not fundamentally change habitudes, or its possibilities are not being optimised. Adequate time and resource for training seem to be in short supply, but the issue is also cultural and complex, particularly in universities where academic staff success has been largely defined by research outputs and the gaining of research income. In such contexts, incentives for change in learning and teaching have been relatively weak. These matters are taken up more fully in Section 6.

'Automation, AI and algorithmic processing will fundamentally change what universities do' is the clear message from one of our participants, and there were echoes of this in a number

of contributions. This is a disruptive scenario: universities will not be able to react to these technological changes through adaptation and modification of a core educational model, for the world economy will change so quickly and radically that they will have no choice but to rethink their relation to the world of work and the curricula that serve it. This technological revolution is predicted to be as consequential as the industrial revolution but faster and radical in its effects. It was put to me that 'anything and everything could change'. Industries, including service industries, will be revolutionised in their practices and protocols; public services and regulation will transform utterly. As large corporates are now investing significant amounts of their R & D into AI and automation, they anticipate a pervasive change in the economic infrastructure, and the questions for HE providers, together with the need for investment and forward-planning, are equally large. What are the graduate skills required for this transformed economy? How will these be identified and developed? What will AI do to learning, and our fundamental understanding of what learning processes actually are, and what their outcomes can be? How will the interfaces between human and artificial creativity and intelligence be negotiated, and what part will universities – widely regarded as the reliable repositories of research, innovation, knowledge, wisdom and truth – play in these developments?

These are large questions for our futures, and it may be that one of the most fundamental is that of establishing an agreed ethical framework for the use of AI in learning and teaching. As more than one contributor explained, this is not a question to be shelved for the future: it is with us now, as the automation of teaching and student advice is beginning to be established. Where students have been advised or tutored through AI systems, the feedback suggests that the service provided is 'just as good as that produced by humans.' So this raises a whole host of questions. For those concerned about the consistency of teaching and advice quality, and equity in the student experience, perhaps automation offers what might appear at this early stage to be some kind of solution. The capacity of AI to process algorithms weighted for personalisation proposes the theoretical model of a deeper analysis of individual student academic circumstances than the necessarily partial knowledge provided by human advisers, so the sheer amount of information that can be processed through AI offers more reliability and consistency for future student advice and academic guidance. Doubtless, this is arguable, but it also raises questions about the relationship between the students and the provider, including whether students have the right to know if they are being taught or advised by a bot.[2] If they do (and surely they do), then are they going to feel reassured or anxious? Does it change the student-tutor transaction by removing it from our current understanding of social interchange? Is this a good thing or a bad thing? Questions and scenarios such as these might seem improbable to many who work in HE, but our participants feel that if we are looking at the ten-year agenda for learning and teaching, we need to consider them now. So we have to have both

[2] For a relevant account of this problem, see for example https://www.businessinsider.com/a-professor-built-an-ai-teaching-assistant-for-his-courses-and-it-could-shape-the-future-of-education-2017-3?r=US&IR=T

an ethical framework for such a development and further consideration of its transactional effects. As one participant noted, 'we have to find the civic space in which this discussion can take place.' This is not, of course, a purely institutional matter.

AI is not the only major concern on the horizon, and it is too narrow to envisage this as the sole technological disruption defining the future. Technological innovations are highly unpredictable across a decade and can develop very rapidly from unexpected sources. An example is blockchain technology, perhaps already known as an 'open-ledger' secure form of credit accumulation in the HE world, but predicted by major business schools to have massive and pervasive effects on how businesses and the economy will be run. A number of our participants argued caution about predicting precise or particular technological change, emphasising instead that the key test will be HE's agility and competence in reacting quickly to the unpredictable.
Colleagues also noted that despite the challenge from Massive Open Online Courses (MOOCs) seemingly diminishing, there were still threats to HE as we know it from powerful technological companies. With large multinational corporates like Apple and Google already operating online programmes for teachers and business the possibility of a large scaling up into the constituent elements of degree programmes or their equivalents is increasingly likely. Therefore, providers need to think very carefully about the true value in their offers for student learning and subject that identified value to thorough interrogation if they expect to retain market advantage indefinitely.

3. How will Student Learning and the Learning Environment change?

Our participants broadly agree that recent and large scale shifts in the learning environment from a predominantly live-lecture didactic base to a social, collaborative learning style, have been effective in improving student learning. Not all providers are moving at the same pace, but flipped classrooms are no longer thought to be unusual, and key terms such as 'engaged learning' and 'active learning' were used by a great many participants to describe the current work in progress that all felt would be the dominant learning paradigm for the future. 'We need forms of learning which are anti-passive, participatory, and applied – these forms have the energies to engage students and carry them forward.' A lot of work has been done on this worldwide, but participants agree that there is still much more to do, including adapting the existing environments for learning to ensure they are fit for future purpose, rethinking new space and facilities, persuading some staff of the effectiveness of these techniques, and weaning students off a more passive instructional mode in which some feel safe, and some feel to be their entitlement (in other words, what they have paid for). So there are big challenges in this agenda around students and their expectations, not least because students at almost all providers will come with different kinds of cultural capital, different assumptions about their learning outcomes, different appetites for working in teams

or sharing assessment tasks, a wide and heterogeneous range of ability, and sometimes from countries with a deeply entrenched didactic learning model. This is noted as a practical problem for teaching staff, but it is also noted by those who refute the concept of a single student market at a more local level: non-residential commuter students, part-time students, and those with care responsibilities or employment commitments were cited as examples of a segmented market that might be excluded from the holistic understanding of a standard three or four-year residential undergraduate degree, and particularly those in which the offer includes an enrichment programme of co-curricular activities. Such students also struggle in the extra demands on their time through non-timetabled group preparations. There is a strain here and a challenge to be met for providers which embrace access, inclusivity and engagement and know that the new learning styles are more practical and feasible for some students than others. However, all these difficulties are at the same time identified as a resource: it may be testing to design learning for such a range of diverse needs, but active and collaborative learning between diverse students is a richer educational chemistry than that defined by homogeneity.

In other parts of the sector, and most significantly in privately funded organisations operating in highly competitive international markets in the teaching of Business, student expectations around their learning are very clear. First, the all-important rationale for signing-up is to get a good, graduate level job at the end of it, and the private institution is often seen as the most effective and proven path to this end in some countries. There is no equivocation here: 'Will you guarantee me a job?' is the primary question for enquiring applicants in this market, which is also seeing increased enrolments from the corporate world with equally focused expectations. Here the student requirements are exacting, and institutional ranking is a deciding factor in student choice. Institutions work precisely to their position in the market on a price-quality ratio, determining how the learning environment is aligned with student expectation on the one hand and a near-certain pathway to employment on the other. Perhaps here more than anywhere else, the proportions of blended and active learning are adjusted to the finest degree, and one participant working in this sector suggests that if the online provision moves beyond 40% of the whole, then experience shows that students might well prefer to go elsewhere: face-to-face tuition and personalised advice is valued highly. Demands are stringent. The curriculum has to constantly change to keep up with cutting-edge developments that require inter-disciplinary inputs such as AI, neuroscience, cognitive psychology, science and creative humanities, and amidst all this, personalised advice and guidance from faculty staff is identified as a key element. Other parts of the sector might see this environment as an interesting hot-housing of a demand-based delivery model that will spread as the financing of university teaching changes and perceived value for money becomes all the more urgent in relation to the quality of learning and an employment outcome.

There are mixed opinions about the value of face-to-face tuition, but a number of participants recognise the need to interrogate the effectiveness and value of face-to-face, rather than accept it as an unquestionably good thing. More than one participant ventured

that this was a vital challenge to meet, since the emotional pull towards face-to-face tuition tends to protect it from a rigorous examination of exactly what its virtues and gains might be for students: ‘if we can meet the challenges, thoroughly and strategically, then there are great opportunities to really improve the learning experience.’ Another stated that ‘there is clear evidence of students walking away from face-to-face’ in their preference for lecture-capture versions of the live event. Our participants also recognise that this preference, with its advantages of replay and time for assimilation and analysis, can add to our understanding of how students learn, since the engagement patterns of online learning in all forms can be made subject to student analytics. It is important to note that lecture-capture is currently a controversial matter too. Pedagogical research into its drawbacks and benefits is beginning to accumulate, and good practice guidelines have been and continue to be developed. The prime concern of our contributors on this and related matters discussed below is that the use of such technologies should be led by sophisticated pedagogical understanding.[3]

A clear priority coming through the majority of the interviews is the need to analyse and optimise the value of face-to-face and personalised learning and teaching. This objective is clearly based on the good research evidence that collaborative and active learning improves student results. In light of this evidence, leaders therefore have to think very carefully about the arrangement of the live learning environment in relation to the virtual. It was put to me that ‘developing a collaborative model which concentrates on the building of skills demands a totality of design’ and that you have to establish productive balance ‘between the affordances of technology and real space.’ In such a design there is always a risk of being drawn towards ‘thick technology’, so one important principle would be that technology needs to be ‘unforced and alive’, integrated in the learning experience according to clearly identified needs, not least because it can over-determine the learning space, both literally and metaphorically, and thereby detract from or interrupt learning – it can ‘degrade the fidelity of social learning interaction’. Collaborative technologies can help collaborative pedagogies, but they are not the prime agent, and have to be understood as enablers in the wider context of learning aims and outcomes. So an unreflective provision of technological aids, or an unthinking zeal for face-to-face might be equally harmful: the key is establishing an evidence base of how students learn, and to address that through understanding the learning environment as a subtle combination of its human, technological and physical dimensions. In order for this to work, a strong and clear learning and teaching strategy has to be the first organising principle for the institution, and estates and other support strategies have to follow. At one university in our project (and one which has seen greatly accelerated improvements in student satisfaction) all estates initiatives for teaching and learning space have to be signed off by the executive owner of learning and teaching to ensure they are fit for purpose.

[3] See for example, https://www.timeshighereducation.com/news/accept-lecture-capture-despite-attendance-drop-says-dean

While there is clear consensus around the new models of learning, there is also disquiet about the general lack of standing for pedagogic research in the academy as a whole. There are mixed opinions on this. Some colleagues express worry about a general lack of interest in pedagogy from academics more comfortable with the established practices of their particular discipline. Others wonder whether the quality of such research really matches up to the high standards expected elsewhere, not least because the research findings often derive from small-sample studies. The structure of learning development units sitting outside of faculty or school structures, and their approaches commonly being evacuated of discipline specific needs are also seen as problematic. There are evidently structural and cultural obstacles here for some, but others are clear that evidence-based developments for pedagogic change are gaining more attention than they have in the past, and attracting increasing interest from academics (particularly early career staff), incentivised in part by accreditation schemes and related frameworks. The future challenge will be to create a greater trust in the validity of pedagogic research and the deployment of evidence from analytics about how student learning can be continuously enhanced.

Opinions on curricula coalesce around the clear view that they are changing, and will need to change more if providers are to retain their relevance and purpose. Two forces of transformation are particularly relevant here: the digital transformation of knowledge itself (how knowledge is compiled and how the transactions around it are conducted), and the worldwide challenges that need to be recognised and addressed through a developed global citizenship. The first is already breaking down some of the artificial barriers in the traditional division of knowledge into subjects or disciplines: inter-disciplinary enquiry, and problem-based questioning are becoming more prevalent and influential in research, and therefore in the forms of knowledge that universities will teach. The second - realised most commonly in topics such as climate change and the green agenda, sustainability, societal inequality, and social conflict for example - is increasingly recognised as a fundamental responsibility of a good university education: the claim is that the HE mission worldwide is to equip the citizens of the future with a high level of awareness about what that future holds. To that end, some universities have been making this broader provision an essential part of their curricula. A relatively common model is that all courses – as they are validated or go through review - are expected to be able to demonstrate how they address a selection of these large topics. Progress through such models has already been made in many institutions, but in others it is inhibited by practical matters such as making room within the curriculum, devising effective assessment methods (if required), and establishing how the disciplines for which students have signed up can meaningfully address these global themes at an appropriate level. There is a strong conviction among some colleagues that this will be a significant challenge for the future, and one which proposes fundamental change. In the future, the curriculum may no longer be defined by discipline-bound content or linear specialism, but by how multiple cross-disciplinary skills of analysis combine to address truly global challenges.

4. Will degrees be unbundled?

Will the regular, standard three or four-year undergraduate degree course look much the same a decade from now? How well adjusted is this long-standing model to the needs of future societies, future students, and their educational and employment ambitions? There is considerable difference of opinion on this between our participants, but most of them see these questions as being critical. Some note how European universities are behind other parts of the world (most notably the southern hemisphere universities) in recognising a need for different forms of study that are intensive, short, and manageable within a busy lifestyle, or a career defined by a continuously shifting skill-set. Micro-credentials, supported by secure, portable and transferable credit currencies (such as that developed through blockchain technology) are thought to hold real advantages in retaining current student markets and developing new or alternative ones, most obviously in continuous professional development. Observers looking for large scale change in the shape of HE awards are looking with interest at the progress of micro-credentials in some of the Australian universities, in the portfolios of private providers, and ‘open badge’ schemes adopted by universities (in Scotland and the USA for example).

It is also argued that micro-credentials can be designed and delivered specifically to support the aims of improvements in access, retention and completion. They are seen as a means of ‘maintaining relevance’ in the face of competition and alternative delivery modes, and in a context where prospective new student markets are hard to reach or pressed for time. In regional or determinedly national providers (where the investment and the mission are to serve or regenerate the regional or national economy) new kinds of credit are also seen as potentially useful in developing enduring partnerships with employers. Many of our participants predict a future where such partnerships will play an increasingly important role, but it is also stressed that universities need to improve their employer liaison considerably, and that new operating and business models will be required if universities are to quicken their pace in responding to the requirements of other sectors. They also emphasise the need for more flexibility in the provision of courses of study.

Yet there is also concern about simply breaking everything up into micro-credentials, and some participants believe this is an unlikely scenario given the strong currency of standard degree programmes. Others feel that more fundamental questions should be addressed before following this strategy, questions predicated by the shift towards the learning of skills and the challenge therein to traditional concepts of subject knowledge. How are new bodies of knowledge to be assembled? How do they combine with our understanding of establishing skills and competencies? How are the potentially heterogeneous elements of new awards to be put together in a coherent way, and what exactly might be the constitution of a ‘unit of learning’ within them? How does work-based learning combine with academic study, and how can prior work experience or study be valued and reliably accredited? These questions are not proposed as obstacles, but as indicative enquiries in a crucial first stage of

development when considering new shapes and durations for degree level work. They are voiced by participants considering the future of flexible, lifelong, or intermittent learning, in contexts where the standard full-time degree may be less attractive. Further discussion of that 'standard degree' is provided in Section 8 below.

At an advanced postgraduate level, micro-credentials drawn from a wide range of providers in niche or specialist areas could allow students to build up their own customised skill sets designed to meet their particular professional, educational or business requirements. Online micros from a wide range of providers raise the possibility of truly borderless higher education in a vast array of options, styles and levels. Some participants are not sure how this could work within the competitive global market, or one so closely defined by hierarchy and closely guarded reputational kudos, although partnerships within specific institutional identities or groups were proposed as a feasible development. There may well be a threat, it is argued, in ignoring these opportunities and leaving the ground open to new providers outside the established sectors.

In summary, the perceived flexibility of unbundling degrees is acknowledged by most, but by no means endorsed by all. One spoke about the radical shift this could effect in the working lives of academics, undercutting the practicality of their research or scholarly specialisms, and pushing people into developing educational mini-products in rapid response mode in relation to employer demand. Others, perhaps speaking from an institutional viewpoint, argue for the strength of a clearer university and award identity that responds to specific national or regional needs. Recognising that the broad skills base and interdisciplinary needs of graduates are unlikely to diminish, they see that the curriculum offer needs greater width. To accommodate this, the four-year US model is seen as more effective than an attenuated award, and further broadening might be supplied through co-curricular offers, perhaps with 'soft' or low-risk assessments and micro-credit measures.

5. Addressing the challenges of access, diversity and inclusion

For many universities and other providers, and particularly those with state or regional responsibilities, access and inclusion are the large, central issues. In institutions with open access for example, there is an imperative to find better ways to help students progress and succeed; in countries where particular parts of the population are under-represented, there is an urgent social need to address opportunity loss and social mobility through education. Whatever the source of student funding, and almost regardless of geographic or demographic context, our participants recognised a large responsibility for universities to up their game to meet the requirements of inclusive participation, with a follow through on ensuring student success: graduation and employment.

There are a number of impediments identified by participants that will have to be overcome if we are to make significant progress in the future, and these might be summarised under the heading of cultural failure. Although this is a generalisation which carries all the usual dangers of such an approach, universities are still felt by many to be inadequately adjusted to the needs and capacities of two student groups: potential students currently on the peripheries of their recruitment pools, and current students who struggle to succeed in the existing learning, assessment and support diets. For some, the needs of both groups could be better met by outreach strategies which do not merely protest a democratising ethic, but demonstrate it in changed procedures and delivery, or in more determinedly defined and practised missions. It is suggested that universities which recognise this work as important will need to be even clearer and more focused on its delivery, and that currently too many other competing demands are detracting from this purpose. So long as universities feel they have to compete on every front (to score well in league tables for example) they are in danger of simply treading a ‘middle way’ which may compromise the focus required for their access mission. One interviewee was particularly clear about this, ‘absolute clarity of purpose, a brave declaration of intent, supported by strong and unequivocal governance and cross-institutional transparency might be the first steps towards making cultural change in the university effective, so that all who work there are committed to a shared philosophy and purpose.’ But if this challenge is to be met, it also has to be supported by national level shifts in attitude by government, the university sector and its stakeholders in order to counter the multitude of forces and attitudes which, in the realm of public opinion and to some extent that of policy, render difference as hierarchy, and equate access with diminished rank or status.

Within the institution, the cultural transformation required might need to focus on an unwillingness to change from academics that worry about standards being undermined by new methods of learning, teaching, assessment and the awarding of credit that is more inclusive: for example, competence-based credit, credit for participation, more flexible means of recognising achievement and learning gain. Currently excluded groups, it is felt, will remain as such, unless providers recognise that the existing repertoire of teaching, learning and assessment may be unwittingly excluding. ‘Engaged learning’ here plays a potentially large role, so long as engagement is recognised as bilateral: there is a strong feeling from some of our participants that HE has to move far more positively towards the needs of excluded and disadvantaged students than it has done to date. Other remedies suggested to meet these challenges are ensuring support is integrated into the point of delivery rather than existing outside of it as a referral or even an emergency service, rethinking student finance and support to ensure continuous periods of study rather than forced breaks due to hardship, illness or temporary incapacity, more flexibility in delivery and assessment for those whose lives are more complicated and characterised by chronic circumstances.

The resources needed for these kinds of transformation are clearly identified by those participants who recognised this as a key global challenge. The many remedies proposed

are known to be costly, and though not necessarily exorbitant, they will require a re-basing of institutional budgets to ensure funds are available for training, staff development and student support. Further work also needs to be done with employers, both within the degree programme (through advisory boards and partnerships for example) but also beyond the point of graduation when students may be disadvantaged compared to others by lack of networks and connections to the world of work, by their differences, or their lack of confidence. Post-delivery support also sits well with the idea that in future providers might see their regional role operating through a revived understanding of lifelong learning, the building of a portable learning portfolio, and one that can be repeatedly refreshed as requirements change. While such re-orientation is a potential benefit to all graduates, it might be especially so to those identified as disadvantaged.

Meeting the challenge of inequity is not only a regional or national responsibility. It is also understood as a global concern in a world where it is predicted that divisions in economic wealth and opportunity will widen even more. So one main challenge identified is that of student flow and mobility around the world. The establishment of an internationalised market for universities has of course increased opportunity, but for the most part this has been to the mutual advantages of relatively wealthy students and revenue-generating universities. It has made little impression on the inequalities evident in global HE participation. One of our contributors recognised clearly that more responsibility could be taken by providers to address this by developing partnerships in new forms of digital provision which could constitute ‘a rehabilitation of free university education’, citing the University of the People as an example of such practice and a possible partner. The expansion of such schemes might be one of the largest educational opportunities available to universities in the next decade in countering global inequality and the disenfranchisement of large numbers of people. It is recognised that the democratisation of good citizenship is vital to meet the large global challenges around building sustainable and responsible economies.

6. Is the academic workforce equipped for the future?

As indicated in passing references in the sections above, one of the main challenges for learning and teaching across the next decade is likely to be the constitution, aptitude and capacity of the academic workforce. There are multiple factors combining here to produce this challenge and its manifestation in the general anxiety about a lack of flexibility and conservatism in the workforce as a whole. Many feel that the current constitution of academic staffing is problematic, recognising a big and generalised picture of an ageing workforce, a casualised workforce, one skewed towards investments in research accompanied by a lukewarm enthusiasm for change in teaching practices. None of our participants are confident that the status quo, and the predicates for the future that it holds, are sufficient to meet future needs. There are no voices suggesting that nothing should change, or that without further development and rethinking staff will be able to cope with the

future pressures in learning and teaching and the educational portfolio. This is not simply a complaint about a recalcitrant workforce, though resistance to change was quoted as a common phenomenon. Overall however, the concerns about future capacity are enveloped in a contextual analysis of how increasing demands on staff are compounding at what may prove to be an unmanageable rate (‘there is an increasing pressure on academics to do too much’) and the result could be a further erosion of capacity and more serious and widespread threats to staff well-being and mental health.[4]

Our contributors agreed that one of the most important responsibilities for the future health of universities is to provide adequate resources for teaching improvements. Staff need time to develop new techniques, not only in the area of emerging technologies, but also by consulting evidence-based pedagogic research, undertaking training, and engaging in continuous professional development. Institutional difficulties in establishing a balanced workload for staff, and particularly in the research-teaching axis were cited as a major problem, exacerbated by the increasing demands in each field. As research assessment exercises in their various manifestations across the world have developed, so the thresholds for research activity continue to increase, along with the expectations around quality, impact, capture of research funding and establishment of partnerships. In the field of teaching, the requirements to produce high levels of student satisfaction, improvements in retention, progression and employability have also ratcheted up continuously. Performance management uses metrics in these institutional priority areas to rate staff on achievement and to set future targets. Although this culture of measured achievement has produced a greater professionalisation and improvement of services, it is also felt that there have been costs in the form of stress, strain and serious disturbance in work-life balance. Further, the common structures of university organisation, with separate management or executive lines governing particular areas of professional achievements and institutional targets, exert discrete demands which then have to be met, homogenised or reconciled at local management levels or at the level of the individual: these then become real pressure points. Within this environment, there are also perceived inequalities across gender divide, ethnic origin, and staff with disabilities. Clearly, this has to be addressed.

The division of academic responsibilities into teaching and research in new contracts (‘teaching only’ contracts for example) might appear to be a plausible resolution to such conflicts, but it is not endorsed as such in this consultation. Rather, it is seen as a worrying development. There is a major concern about what might be lost by this, most particularly in the teaching arena itself, and it is predicted that these moves will further exacerbate the unhelpful hierarchy between research and teaching. While it is felt that some of the new measurements around teaching have helped to raise its status, the construction of a teaching only cadre is anticipated as undermining this upward momentum, since teaching still seems to take second place. Although many universities have developed their recognition and reward structures in an attempt to create parity of esteem, the profession as

[4] See *Pressure Vessels*, HEPI Occasional Papers, 20, Oxford, UK, 2019

a whole is a long way behind such reorientation. One institution's promotion scheme may not match another's, and cross-institutional mobility is therefore impeded. Casualization of teaching staff is felt to be too extensive, weakening the sound foundation on which future strengths in teaching might be built, and also opening up too large a gap between generations of staff and presenting obstacles to succession planning.

There is clearly a danger of institutions becoming mired in these difficulties, and our contributors are highly conscious of the need to resolve them as a primary task in the plans to provide a successful learning and teaching strategy for the future. At the same time, they cite experience of positive and significant change, one powerful example being the change driven by a 'communities of practice' approach, where the broad direction is set but the solutions and detail of change not mandated. Another recommended approach is that which places good evidence-based research in the hands of academics so that the rationale for change is clear and logical; once this is done, 'academics will naturally follow the evidence, and react accordingly.' Staff engagement is thought to be crucial here, not least because of the dangers around staff health and wellbeing, but also because the bringing of people into the discussions around change are more likely to lead to successful outcomes in the round. The dual aim 'is to make better learning for students and better working lives for staff.' These approaches suggest the importance of a shared responsibility for change as a positive way forward.

7. The responsibilities of leadership and innovation

One of the questions in our interviews was about where responsibility for confronting the future of learning and teaching and its challenges should be located, and the answers, without exception, were 'at the top'. Yet it is also the case that this recommendation is an acknowledgement of executive and leadership responsibility, and not an endorsement of a linear 'top-down' approach. The concept of good leadership recommended in these interviews is a leadership that saturates the organisation rather than being defined by management lines. So the executive and senior staff are understood to have a key responsibility for the long view, for consistency of purpose, and for the sustainability of the learning and teaching plans, and that should also be shared and supported by the board or council or its equivalent. Similarly, people think that leadership responsibilities should be recognised at every level, with differentiated circles of influence to ensure that all staff have the licence to recommend change and improvement, and indeed, that it is their responsibility to do so.

This broad picture presents no surprises and is a common model for good management practice in a wide range of organisations, but it is also the case – as stated in the introduction to this report – that the leadership of learning and teaching has only recently gained real traction at executive level in many institutions. A long-standing problem at the

other end of the line has also been that course leaders, and to some extent heads of department have traditionally complained of being given leadership and management responsibilities without being given the tools for either. The model of this saturating leadership may be familiar elsewhere, but it is still developing in universities. In one institution partaking in our survey, all leaders, including the executive, have to retain a teaching function or experience on a regular basis, and this is seen to be particularly valuable in ensuring that decision-making is informed by current practice, and in maintaining currency and credibility. Everyone has to be 'teaching-aware' to ensure that the focus of the whole institution is in the right place. Another contributor stated that 'teaching and learning leadership is no longer a structural formality - it is a broad university-wide issue requiring unequivocal support from all areas, departments and professional services.' There is evidence that institutions are re-shaping practice to ensure strategic alignment with learning and teaching priorities, but evidence too that there is still more work to do.

The transformative challenges required for learning and teaching will call for sophisticated and consistent leadership styles. 'Leaders have to model the virtues, competencies and behaviours that they espouse' was a well-supported recommendation. They have to be consultative, and have to be able to show that consultation counts. Closing the gap between course level improvements and management oversight through taking shared responsibility for the change and improvement agenda can result in a healthy 'no blame' culture developing, and materialises the notion of true partnership across institutional structures or hierarchies.

In a similar vein, the leadership of innovation is understood as essential and vital, but also impossible to drive in a purely linear mode. Successful innovation more frequently develops in organic models, through individual staff or small group problem-solving, and more incentives and resource are seen as important enablers for such developments. Younger staff are commonly seen as the richest source of innovation, and incentives such as innovation funds are being proposed as an effective way to develop new practice that can then be piloted, evaluated and adopted more widely. Recognition and reward structures to encourage innovation are seen to be valuable and may need to be further developed on a larger scale. The consultation produced a call for new models of innovation deriving from other sectors, perhaps to counter the inertia sometimes found around learning and teaching. Where are the future-labs for learning and teaching, or the new media sources and support for community innovation? How good are universities really when it comes to breaking down disciplinary boundaries or even simply sharing good learning and teaching practice across subjects and schools? Leaders must help by facilitating the structures and incentives for the change agenda.

The participants in our survey called for the necessity of leaders to be outward-looking in all respects, and one key role identified was to ensure that leaders define the role of the university in terms of the social, economic and citizenry health produced by its education programmes. A number of voices expressed real concern about government

instrumentalism and about the reflexes this might draw from the sector that could further undermine this educational mission. External engagement is regarded as one of the most important responsibilities of leadership: introspection only reinforces the cliché of the ivory tower and all the risks that image of the university carries. 'We must maintain our relevance to the communities that surround us, and leaders will need to show the way.'

8. Is there still a safety zone for the university?

All participants in this exercise expressed serious concerns at some point in the interview about one fundamental challenge in universities' essential educational mission: funding. Currently, there is clear evidence of threats to teaching and learning, and though they come from different sources, agencies or policies depending on context, they are apparently felt everywhere. The change agenda for student education is significant, and all participants are worried about how the necessary investments are going to be financed in the shared context of an uncertain policy climate, slow economic growth, concerns about student debt or ability to pay, rising student and employer expectations, and competing institutional priorities. Closely allied to this foreboding is a fear that funding is increasingly subject to policy that is unappreciative of education as a social good and the benefits of non-vocational subjects. Within this overriding concern, there is no all-enveloping safety-zone identified for the future.

Notwithstanding this, it is important to record that among our contributors there is a substantial sense that to date there has been an underlying stability in the university system itself that has enjoyed a remarkably enduring history, and possibly, signs of continuing resilience. I borrow the term 'safety zone' from one of our participants to evoke this real or imaginary foundation of security which figures – in one way or another – as a starting point for thinking about the future in many of the discussions held.

So what is it? It is the notion of a relatively reliable and largely undergraduate market for a standard attendance-based three or four-year full-time degree across a broad range of subjects. The theory is that while the subject mix is changing, and curricula too, this market will persist. It may be subject to demographic or fiscal pressures, but it will survive. Some participants recognised that the innate conservatism of the traditional educational model might indeed be a strength, and that while other sectors have been deeply disrupted by technological and consumer behaviour change, universities have proved themselves to have some immunity, and that immunity derives from the underlying presence of what is understood to be a kind of gold standard, sustained at least in part by the student and wide stakeholder demand for a traditional rite of passage between school and the world of work. The concept of the safety-zone provides a reassuring centre and assumes a student population largely motivated by academic achievement, love of or enthusiasm for the subject, and at ease with the current dominant shape of the academic year and full-time undergraduate education. And persisting with this just a little further, it is imagined as a solid

point from which the majority of institutions prosper, and to which each and every provider plots its own position. If, for example, they see themselves as an elite or perhaps simply a selective provider and recruiter, with a large degree of choice about their future size (perhaps they will expand, perhaps they will protect their rarity value by consolidating), then they recognise their position as being right in the centre of the safety-zone. In such a position, the rationale for significant or radical change may be relatively weak.

At the other end of the scale, a university which competes privately for business at an international level may not recognise the safety-zone at all; they sit outside of it and plan with continuous and ever-changing reactions to the student market, and in particular, to expressed student needs and the currency and standing of the award outcome. Here, significant or radical change is simply the order of the day. It is a wide spectrum, and the majority of institutions will be neither at its centre nor perimeter.

The evidence of this consultation is that most contributors would probably subscribe to the view that the zone is shrinking, and some might suggest that its constituent elements are no longer fit for purpose; that for example, they serve lifelong learning poorly, they struggle to accommodate new forms of knowledge, they are not capable of meeting the challenges of access, of new technologies, or the demand for small bites of learning that might characterise the agile mode of future skills training. A couple of our contributors would not be drawn on making long-term predictions. They see a fast-changing world in which there will be rapid and unpredictable technological innovations, small disruptive and privately-financed experiments and initiatives, new players in a global, volatile market, and new co-ordinates through which we will position ourselves or find ourselves positioned. While they acknowledged the powerful and enduring model proposed by the safety zone idea and its possible resilience, they argue that the HE sector is not and cannot be indefinitely immune from radical change or disruption, but predicting exactly what such disruption would be was not possible. We might carry on with our current models, modifying them as we go, but then, ‘something – and perhaps something at first seemingly quite small – will catch fire..........’

9. Conclusion

When asked about what actions are needed to meet the challenges of the future for teaching and learning, almost all our participants responding by stating the need for a bi-lateral shift: governments, state funders, or their equivalents need to introduce new policies and stable funding regimes to meet the large challenges in skills investment for new economies and technologies, together with the social challenges of access, stalled social mobility and well-being; HE providers need to develop more flexibility, innovative proposals on delivery, and faster reaction times in responding to external requirements. They also need to ensure increasing quality in the student learning environment, and a broader agreement between students and providers on the understanding of value for money.

Our participants recognise opportunities in collaboration and partnership to make better and more co-ordinated provision for the different kinds of students and their diverse needs, and there is great potential for providers to sharpen their mission and distinction in so doing. Such opportunities for collaboration, and specifically collaboration for inclusion, are currently inhibited by an obsessive public concern with rankings, fuelled by a highly competitive student market. HE providers of all kinds could realise their potential more effectively if they operated in an environment where the different services they offer could be recognised as different in kind and not stratified by rank. Further, a more enlightened understanding from employers about the value of different awards and providers would lead to their capitalising on a wider talent pool and contributing to the enhancement of social mobility.

Many think there are real opportunities now for a step-change in pedagogy and improved student learning: 'it's time to start thinking much more seriously about the collective will for real pedagogical innovation and how it can be sustained.' This idea of 'collective will' occurred in a number of the interviews in the form of a call for more transnational and cross-institutional discussion about how we can best serve all of our students' learning and teaching and improve their prospects through establishing a commonality of purpose. The notion of a common purpose might appear to sit uncomfortably alongside the competitive arena in which the majority of providers operate, but it is neither arcane nor complex and might consist in a simple but emphatic restatement of the fundamental mission of the sector. In the words of one of our participants, 'The real opportunity we must now grasp is to define the role of the universities in terms of the social and economic health that they bring to the communities around them.' Each of the participants in this consultation, whatever the circumstances of location and institutional mission, would probably subscribe to this as a broad but vital statement of their educational purpose, towards which their developments in learning and teaching will constantly strive.

10. Annex 1. The making of this report

This report was constructed from the material provided and discussed in a series of interviews with executive or institutional leaders in a range of HE providers. Each participant was provided with a list of possible questions to explore, and interviews were conducted in a semi-structured mode so as to not to impair or constrain the accounts that were so freely and generously provided. Questions were asked about the three key global challenges that will face teaching and learning in the HE sector over the next decade, the opportunities presented, impacts on different groups, actions and innovations required to respond to such challenges, and resources and responsibilities required to address them. AdvanceHE recruited the participants and set the agenda in the list of questions. My role has been to organise the material of these interviews into a sectionalised report, to synthesise where appropriate, and give priority and emphasis to those topics engaged by the majority of participants, or indeed those that were felt by individuals to be most essential.

I am most grateful to the following for willingly giving up their time and the benefits of their expertise. I have striven to do adequate justice to the quality and energy of their contributions, and I'm sorry that it has not been possible for me to record everything that was put to me in their rich and inspired accounts of future challenge.

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Dr Javier Blanch Baixauli, Associate Chair, International Development, ESIC Business and Marketing School, Madrid

Professor Paul Bartholomew, Pro Vice-Chancellor, University of Ulster, Northern Ireland, UK

Dr Meegan Hall, Associate Professor, Centre for Academic Development, Victoria University of Wellington, New Zealand

Professor Osama Khan, Pro Vice-Chancellor, Solent University, UK

Professor Helen O'Sullivan, Pro Vice-Chancellor, University of Keele, UK

Sam Parrett OBE, Group Principal and CEO, London SE Colleges, UK

Professor Jim Pounder, Pro Vice-Chancellor, Fiji National University, Fiji

Professor John Sawkins, Deputy Principal, Heriot Watt-University, Scotland, UK

Professor David Sadler, Deputy Vice-Chancellor, University of Western Australia

Professor Eunice Simmons, Senior Pro Vice-Chancellor, Nottingham Trent University, UK

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