Why universities are under threat? What do they need to do if they are to survive? **Mark Farrell** and **John A Davis** argue that universities outside the elite must embrace disruption or succumb to it

Embrace disruption

It is time to get comfortable being perpetually uncomfortable. The known, mostly predictable, rhythms associated with universities of the past 100 years have given way to syncopation caused by two off-beat troublemakers: technological change and cost pressure

Barely surviving relegation in the previous season and against odds of 5,000 to 1, Leicester City won the English Premier League (EPL), a league that for the last 20 years has been won by only four clubs, (Arsenal, Chelsea, Manchester City and Manchester United – the Ivy League of the world of football).

To put it into perspective, each of the previous winners had paid more for one of their current players than has the Leicester manager for his entire team.

The 2015-2016 season of the EPL has been subject to the most wonderful disruption imaginable. Despite having less financial muscle than the top clubs, Leicester used technology and statistics to discover players ignored by others and, against the prevailing thinking of "possession football", deployed a lightning-quick counter-attacking style, conceding few goals and winning many games 1-0. Their use of technology, the ability to keep costs down and develop a strategy to outwit their opponents has been a lesson for all of us who work in higher education.

But, I hear you say, what can we learn from 22 players kicking a ball around a muddy field? It is that type of thinking that leads to complacency. And you only have to ask the likes of the top four clubs in the EPL to know where complacency leads to – comfort, followed by deep discomfort.

In short, it is time to get comfortable being perpetually uncomfortable. The known, mostly predictable rhythms associated with universities of the past 100 years have given way to syncopation caused by two off-beat troublemakers: technological change and cost pressure.

Taken individually, these twin dynamos of disruption are not unfamiliar. Indeed, both have been found residing side-by-side with the business world, upsetting the *status quo*, frustrating otherwise well-intentioned people and forcing less nimble competitors out of existence or into extreme makeovers just to survive.

We have seen such cycles of disruption in industry before, from the invention of the horseless carriage to the veritable dissolution of the newspaper industry. Transitions like these rarely occur easily and many unprepared organisations have quickly found themselves in the dustbin of history. For the glass–is-half-empty crowd, such change is fraught with danger, pain and loss. But for the glass-is-half-full believers, the changes represent opportunity and the chance to revive and revitalise one's future.

The challenge lies not in deciding which half of the glass represents your perspective but in how you plan to thrive in this decidedly uncomfortable new world.

This dilemma today confronts universities around the world, especially those we describe as "non-elite". We are quite familiar with the "elite": from Duke, Stanford, Oxford, Cambridge, MIT, the Ivy League, to the University of Tokyo and more, the names are familiar to all. These universities have attained an extraordinary level of prestige, with international reputations for excellence in multiple domains. Their qualifications confer prestige on individuals and are perfect examples of positional goods.

In a survey in the US, respondents ranked Princeton in the top 10 law schools in the country. This is a remarkable achievement given that the law school in Princeton began in 1846, graduated seven students and ceased operating in 1855. Despite its short-lived status, in the minds of respondents "Princeton Law" was a top 10 institution.

Non-elite institutions may be perfectly competent and known in their local markets but they increasingly struggle for relevance and visibility in a global higher education world where over 17,000 universities are competing for the best talent (students, faculty, staff, partners). With technological change bringing new content delivery platforms and, along with them, radical new cost models (ie *free*), the need for non-elite institutions to redefine who they are, what they do and how they do it is essential if they are to survive, let alone thrive, against the superior funding and resources of elite institutions and the elegant simplicity of technologies offering free content.

In effect, technological changes and cost pressures mean universities must do more than just deliver content. They must take clear advantage of the contexts in which they operate to have a differentiated position that resonates with target stakeholder audiences.

If you are reading this article in the faculty lounge in an elite research university then you may well be quite comfortable with the discomfort wrought by technological change and cost pressures. After all, your institution has weathered the storms of change for decades if not centuries. Elite institutions are in a unique position of marketing a product with relatively inelastic demand. College tuitions and fees rise every year, typically faster than inflation. US universities, for example, have experienced tuition increases outpacing inflation for decades, yet demand remains stronger than ever.

According to *US News & World Report*, Stanford University had the lowest acceptance rate in the US in autumn 2013 at 5.7%, and the first 10 schools on the list had acceptance rates under 9%, with acceptance rates for the top 25 institutions under 15%, including seven of the eight Ivy League universities.

Of course, most institutions are not among the elite nor even recognised beyond local markets. The main ranking bodies review only the top 500 institutions yet we suspect non-elite institutions operate in highly competitive markets and compete for many of the same talented students as the better known schools.

While we do not believe that all of these universities are under threat, we do believe that a good number of them will struggle to survive unless they develop a value proposition that not only resonates with their stakeholders (students, faculty, employers, the professions, government) but also clearly articulates what makes them different and why that distinction is relevant to the market.

Even with a clear value proposition, departments within universities may not all be protected, despite the valiant efforts of the faculty within to maintain viability, forcing some to close down entirely or merge with others. For the least prepared institutions in extreme situations merger or even demise may be their only options.

Clayton Christensen's work in innovation and growth provides useful insights about the challenges posed by organisations that fail to innovate and the opportunities for those that do.

In 2002, Christensen and colleagues contended that disruptive innovation represented a growing threat to education in the US. More than 500 institutions had closed down in the

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previous decade and more than 2,000 corporate universities and online/distance learning institutions had grown rapidly. Disruptive innovation appeared to be a key driver of these changes.

Christensen argues that disruptive innovation explains why corporate training constitutes a disruptive threat to traditional approaches to business education. Why? Simply put, corporate training offers a more accessible, often uncomplicated and tailored product well suited to problem solving at work at a price that compares favourably with the high cost of a top-tier MBA programme.

In addition, Christensen cites the University of Phoenix (enrolment 200,000-plus) as another example of an education disruptor because it targets non-traditional education consumers and emphasises a student-centric philosophy through its online course offerings designed for the busy lives of adult learners.

Technological advances have impacted businesses and industries around the world so we should not be surprised that higher education is also being affected. Companies everywhere are using new technologies to contain costs by streamlining back office operations and supply chain activities and universities are facing their own cost pressures for which these technologies offer practical solutions.

Beyond operations, new technologies are impacting one of higher education's most hallowed traditions: knowledge dissemination. The advent of MOOCs (massive open online courses) have made course knowledge accessible to anyone with a computer, tablet or mobile device far less expensively, or even for free, and dramatically increasing the reach to hundreds of thousands of students for the most popular MOOCs.

Coursera, a leading MOOC (along with edX and Udacity) has more than 10 million users. The early media buzz for MOOCs in 2012 mirrored the excitement that ushered in the dot.com era in the late 1990s, with many reports suggesting that traditional bricks and mortar universities would go out of business. As we now know, traditional retailers did not disappear and, indeed, are thriving while online retail has also thrived.

By the same token MOOCs have not replaced universities. Instead, they may well be serving a more complementary function, even inspiring faculty to deliver content in innovative ways.

Adaptive learning platforms are yet another example. Offering students a range of new media and related instructional tools designed to adapt to their learning needs, including dynamic e-books, video tutorials, animated case studies, games and simulations, adaptive learning technologies are a potentially powerful complement to existing in-class instruction. The software identifies a student's knowledge weaknesses, redirecting them to the content requiring additional study. Periodic assessments can be designed to measure progress at intervention points designated by faculty. Data captured by the system helps it adjust to each student's unique learning needs.

However, even with the potential represented by new technologies to enhance and complement higher-education delivery and student learning, legacy structures within most universities will increasingly hinder their ability to successfully adapt and, thereby, avoid being disrupted.

For example, academic promotion, tenure and salary increases are primarily dependent on research productivity and quality. While teaching is an expected responsibility, it is a far less influential factor in tenure decisions. The challenges are clear: there are not enough incentives for faculty to practise innovative teaching approaches since rewards are skewed toward research productivity. And many academics perceive teaching as a distraction from their research initiatives, reinforcing the view that the emphasis on research productivity negatively incentivises academics to only satisfy the minimum requirements in their teaching.

Despite the research emphasis of most universities, actual research productivity and quality is not evenly distributed among academic staff. According to one study, research output per

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academic was a median of three journal papers over a five-year period. Another study of 18 economics departments in Australia revealed that the average economist published less than one refereed journal paper every two years, and 25% had no publications over a five-year period.

Yet another research productivity study of 22,271 economists from 600 European institutions in 18 countries revealed the following: a) economists published 2.7 articles each between 1971 and 2000 on average (journal quality was not factored into this figure); b) even more interestingly, nearly two-thirds (60%) of the sample published nothing. When research outputs were divided by length of career, the top 1% of leading producing economists published an average of two papers per year and, across the entire sample, the average economist published one paper every five years.

Based on these findings, the evidence suggests that even with a promotion and tenure model structured to reward research activities, universities are not always getting the proverbial bang for their buck.

Examining academic salaries leads one to wonder how long institutions can continue to invest in research using the current model when the returns are uneven at best. In the US full-time academic salaries range widely, from $99,000 at private non-profit doctoral institutions, to $85,400 at private non-profit institutions, to $73,900 at public institutions, and $45,700 at private for-profit institutions.

As one study showed, the ROI expectations are further complicated because a faculty's research-centric orientation was inversely related to their student-centric orientation, which was also negatively related to salary compensation.

More simply, being a productive research scholar was counterproductive for teaching excellence. As the studies show, faculty that emphasised teaching excellence were more likely to have lower salaries, reinforcing a dilemma many universities face as they confront a future in which they must increasingly justify how they will survive, let alone thrive, alongside better-funded, better-known elite institutions.

At the risk of sounding heretical, bold thinking is in short supply at many, if not most, universities. Rather than chart a new direction and work towards conceiving ways to innovate their education model (a variation of the old maxim "necessity is the mother of invention"), most universities and their leadership continue to imitate the legacy standard represented by the top-tier institutions even though the deck is stacked decidedly against them.

In one sense this is understandable since most university leaders are products of the system in which they gained their expertise. Few are therefore brave enough to be disrupters or have the perspective born of pushing boundaries working in other organisational contexts. One can almost hear them collectively rationalising "imitation is flattery (cost effective), and innovation is foolhardy (expensive)".

But we wonder if the real cost comes from a misguided belief that maintaining the status quo, or making tiny incremental changes, will allow non-elite institutions to survive. Most universities as we know them today continue to operate a very costly business model, saddled with brick and mortar facilities requiring constant upkeep (and, in the case of the US, a plethora of collegiate sports-related investments), a proliferation of expensive graduate programmes and an expensive reward/incentive model that disproportionately favours research productivity over teaching excellence yet too often with underwhelming results in both areas.

$99k

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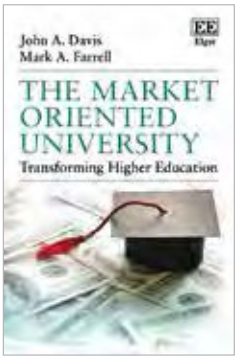

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We believe universities must address these challenges head-on. The vast majority of students will not study at the world's elite institutions, enrolling instead in programmes that offer a compelling education and prepare them for life post-graduation.

With the rapid advances in technology providing affordable access to higher education almost anywhere in the world along with the promise of lower costs, we believe the time is ripe for university leadership everywhere to disavow imitation and instead exhibit bold thinking designed to unleash the tremendous intellectual capital that is otherwise constrained by a static education model designed for a bygone era.

It was the American baseball player Yogi Berra who famously said "The future ain't what it used to be". Higher-education institutions are facing a perfect storm in the shape of reduced government funding, stiffer competition from non-traditional providers, industry demanding higher-quality graduates and students behaving as consumers, demanding returns on their human and financial capital.

For higher-education institutions we suspect that the future will be very different depending upon their reputation, brand image and prestige factor. When we add to this the ability to actually deliver the "transformational experience" promised on the website, not to mention graduates with knowledge and skills to compete in a technology driven, global economy, we suspect many universities are going to end up being outmanoeuvred by the Ubers of the educational world or displaced by their prestigious counterparts.

Choosing where, what and how to study is becoming more important in relation to a return on investment. According to *The Times* newspaper in the UK; "students appear to be attracted to those [institutions] with a strong academic reputation or high quality vocational courses with good links to employers".

Like the taxi industry that is being turned upside down by Uber or the EPL being disrupted by Leicester, non-prestigious institutions that do not harness the power of technology, do not reduce their high cost base and do not recognise that the needs of students can be met with a variety of innovative delivery models will become extinct.

Those institutions that bravely embrace this imperative, place students at the centre of learning and pursue imaginative new initiatives will find themselves thriving, even with continued cost pressures and technological advances. And if you don't believe us, ask Leicester fans.

A version of this article first appeared in the magazine *Dialogue* June/August 2015.

The ideas are further examined in the book *The Market Oriented University Transforming Higher Education* by Farrell and Davis, published by Elgar.

http://www.e-elgar.com/shop/the-market-oriented-university

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