

## **University Meets Corporation**

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### **Abstract**

*Companies as well as students see a significant gap between the skills they learn at university and the skills needed in employment. Using Clayton Christensen's concept of disruptive innovation, this paper argues that the traditional university model can be disrupted to align students' progress in education with what the company wants to see.*

## **The need for a New Education Model**

Companies are not getting the employees they need, and are discovering that graduates aren't fully prepared for roles once they are in place. According to McKinsey, the most frequently cited reason for talent shortages in EMEA is a lack of technical competencies among applicants, at 34%. (McKinsey, Talent shortage survey, 2012). Consequently, education needs to be much more focused on learning relevant skills for the job market.

At the same time, students have different expectations of what they want from their learning providers. Generation Z are no longer passive learners. A combination of seeing themselves as customers, alongside an expectation of personalisation and instant feedback from their experiences as digital natives, creates a very different landscape for education providers.

Further compounding this is a crisis in funding. Student fees are multiplying, and for many higher education students, fees are reaching a tipping point; debts can become higher than their projected income expectations, making them question going to university at all. Those from less well-off households are hit particularly hard as a result. The global recession has led a situation 'fragmented between haves and have-nots,' David E. Shi, a former president of Furman University in South Carolina observes (Fischer, 2011.)

This perfect storm of company discontent, student expectations and financial considerations makes it pressing that traditional models evolve. The rise of MOOCs, boot camps and distance learning is quietly, but pervasively, pressing on the prestige and ubiquity of traditional universities. With employers less focused on traditional degrees and more interested in what potential employees can bring to the business, this shift away from traditional pedagogical approaches will only continue.

For Clayton Christensen, disruptive innovation is 'a process whereby a smaller company with fewer resources is able to successfully challenge established incumbent businesses'. (Christensen, 2015, p.46). We would argue that university education no longer needs to be the preserve of long-established, elite organisations. A more flexible, dynamic approach to tertiary education is, it could be argued, long overdue. Its benefits will resonate with both students and businesses; and judicious use of technology is the key (but not only) enabler.

Research bears out the assertion that there is a disconnect between students and jobs. McKinsey's recent *Education to Employment* report states that globally, '75 million young people are unemployed, but businesses can't find enough skilled workers to fill job vacancies.' (McKinsey, 2015, p.16.). Meanwhile, businesses frequently complain that they don't get the calibre of graduates they need to fill the roles they have, particularly in STEM subjects.

Why has this situation come about – particularly considering that fees for universities have increased at increasing speeds over the past few years? And how can universities respond, to better match their students with the jobs that businesses want to fill?

Consider some context. The McKinsey report reveals some fairly dramatic figures.

- Half of young people are not sure that their post-secondary education has improved their chances of finding a job.
- Almost 40% of employers say a lack of skills is the main reason for entry-level vacancies.

We can also note some equally significant statistics about how much is invested in our young people's education. At the Center on Education and the Workforce at Georgetown University, Anthony P. Carnevale and Nicole Smith reveal that in the US,

- Approximately \$1.5 trillion or 11% of GDP is spent on human capital or skills development each year.
- Elementary and secondary education takes the largest share of this: \$608 billion (41% of spending).
- Together, formal and informal training by employers represents \$454 billion (30% of spending): \$313 billion on informal training and \$141 billion on formal training.
- \$380 billion is spent on higher education, which primarily consists of formal education programs at colleges and universities. (Carnevale, Anthony P & Smith, Nicole, 2014, p.2).

Some \$380 billion is spent on higher education – and yet employers can't find the right graduates for their jobs? Something is amiss somewhere along the line.

### **Disruptive Providers are increasing in Number, Scope and Popularity**

Take the gradual success of disruptive providers like Udacity, which offers 'nanodegrees'. Starting out as a MOOC, Udacity has developed nanodegrees 'in partnership with leading technology companies ("built by industry"),' Managing Director at University Ventures and former McKinsey consultant Ryan Craig explains. 'The thinking [is] that Google's involvement in the Android Developer Nanodegree improves the curriculum; the Google brand doesn't hurt either,' Craig states. 'Udacity has done the same with iOS (Apple), Tech Entrepreneur (Google) and its other programs (by a committee of leading technology lights).' (Craig, 2015, p.2.)

Udacity is slowly but surely making progress. 'A *New York Times* profile of Udacity on September 17 [2015] revealed that Udacity has 10,000 students enrolled in Nanodegrees – a number growing by 30% every month.' If, as Craig points out, '10,000 students are paying \$200 per month, that's annual revenue of over \$20M – perhaps enough for profitability.'

The aim of such courses is to be 'shorter, cheaper and more accessible' and create 'credentials – badges – that employers will recognize and value as an alternative to the existing, expensive and constantly derided degree-industrial complex. To this end, both companies are trying hard to link their content to employers. Udacity's Nanodegrees carry with them the names of the world's most famous technology companies – where traditional universities rely on their long-established brands, Udacity piggybacks today's tech giants to boost its brand for it.

Universities at least need to address these side-swipes from badge-based providers. Consider a few more damning figures from McKinsey:

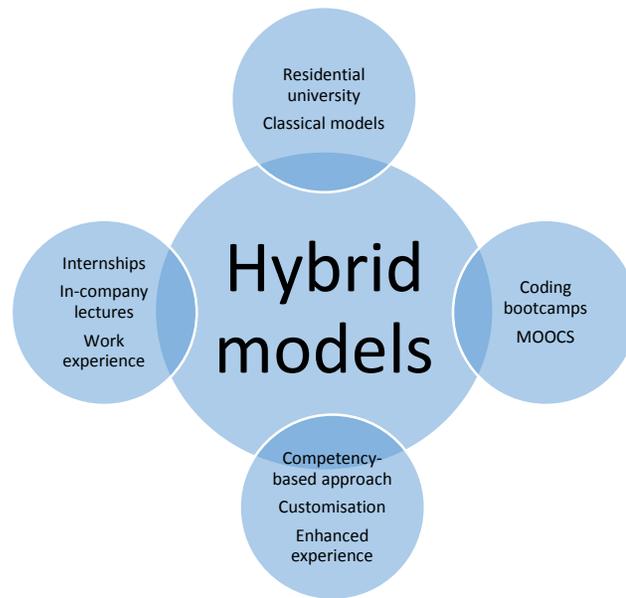
- A third of employers say they never communicate with education providers.
- Of those that do, fewer than half say it proves effective.
- More than a third of education providers say they are unable to estimate the job-placement rates of their graduates.
- Fewer than 50% of graduates state they had a good understanding of what disciplines lead to professions with job openings and good wage levels when they chose their course. (McKinsey, 2015, p.18).

A final criticism of traditional degrees comes from Google itself. Degree grades are ‘worthless as a criteria for hiring,’ according to Google’s Senior VP of People Operations. (Bryant, 2013). With the world’s leading tech company now partnering itself with badge-based providers like Udacity and Coursera, statements like this surely mean that traditional education has to sit up and take notice.

### **A Route through these Issues**

**Hybrid models** are a powerful way forward. They can potentially disrupt the classroom-only model and augment it with online modules, in-work internships and guest lecturing from business leaders, directors and managers, as well as academics.

A hybrid model can be visualised in the following way – a rich balance of the best of classical models, but incorporating disruptive innovation and advances in technology too:



Hybrid models can offer advantages for students over traditional universities in five key ways:

### **Bridging the Gaps**

Hybrids have the ability to **better match graduates with employers**. They have the potential to be the bridge between the academic and the corporate worlds. By having options that include formal working relationships with corporate affiliates, in-work placements and a focus on guest lectures from business leaders, directors and managers, hybrid models give the graduate a better understanding of the workplace and can identify where they need to fill gaps in experience, in addition to their academic training.

‘What we’ve been historically good at for a very long time is telling the world exactly how long someone has sat at a desk,’ argues Paul LeBlanc, president of Southern New Hampshire University. (LeBlanc, 2013). ‘But we’ve been much less precise in saying what people have actually learned.’ LeBlanc asserts that in the past, a college degree was ‘a proxy for certain things: the ability to think critically, the ability to write well, the ability to present well.’ Today, however, LeBlanc argues that ‘when I meet with employers, I will sometimes ask them, “Have you hired someone with a college degree who doesn’t write well? Have you hired somebody with a college degree that you wouldn’t put in front of a group of customers to make a presentation, who can’t understand a balance sheet?” And it’s like touching a nerve.’

Ryan Craig takes up this point. ‘The national skills gap is well documented in the mainstream media and a top priority for policymakers and CEOs alike.’ (Craig 2015:2.). Yet ‘our system of higher education produces only one STEM graduate for every 2.5 job openings.’ The numbers are even worse for women, ‘who earn just 18% of computer science degrees.’ And although there are in excess of five million STEM job postings annually, ‘fewer engineering degrees are awarded today than in the early 1980s.’

For Craig, too many students graduate without the right skills to match what employers want. His argument is that ‘talented students from many institutions need to be trained for and matched to many employers.’ This is a role that coding bootcamps and staffing companies like eIntern can fulfil. They will ‘come to campus and provide a clear pathway to a career’ and will also ‘provide valuable no-risk training to specifically prepare students for the high-risk problems employers are trying to solve.’

There will always be a time-lag between what can be taught on courses, and what companies need and want their new employees to be able to do – especially in, but not limited to, the tech field. Teachers can only teach what they know, and syllabuses have to be agreed and approved well in advance of students being taught. Yet this only proves the need for some kind of shift in education, towards courses that are more closely aligned with, and actively influenced by, real-time organisations. In response, Southern New Hampshire has developed ‘College for America’ to address some of these gaps between what universities are offering and what businesses want to see. ‘That’s why I think it has had such a great response from large-scale employers,’ Paul LeBlanc says (LeBlanc, 2013.) Namechecking other early starters in this area – Excelsior College, Western Governors University, Charter Oak State College in Connecticut for example –he argues that College for America is ‘the first that has been fully untethered from the traditional course.’

## **Matching Capabilities to Work**

The second element is that hybrid programmes lend themselves better to a **competency-based approach**. ‘Advocates say competency-based education puts the focus on students’ capabilities rather than how many hours per week they spend in the classroom (Button, 2015.) In the US, at least 200 institutions have competency-based education programmes – and yet ‘the U.S. Department of Education has been slow to process the applications of colleges and universities seeking approval to receive federal financial aid’ for these programmes. This is an issue that is being addressed, but by no means resolved; perhaps because of the prestige factor associated with traditional university models.

Keith Button: ‘the benefit for employers,’ [advocates] say, ‘is that prospective employees can be judged more easily, based on their demonstrated competencies rather than guessing how their grades will translate to real-world work.’ LeBlanc adds, ‘You’re going to see more competency-based programs coming and I think they’re game changers.’ (LeBlanc, 2013).

It is true to say that employers are changing their approach to what they expect from their graduates, and it’s even possible to question whether traditional university models are still fit for purpose. Witness Penguin Books, the global publishing empire owned by Pearson, which recently announced it was lifting its requirement for employees to have a traditional degree (Weale, 2016). A self-aware and ambitious student can recognise that the tide is changing in the corporate world, and increasingly choose the university course that best suits them; rather than feeling that the name of the university is the most important thing.

## **Rethinking the Campus**

Third is **customisation**. Students get a more personalised experience, and this has notable positive effects on achievement. The ‘hands-on’ element of hybrid models is analogous to an apprenticeship model: internships or similar work experience inside real-life organisations give students a much better grasp of what employers expect. ‘Many of today’s rewarding and well-paying jobs do not require a university degree, but do require some form of post-secondary training,’ says Nicholas Wyman, CEO of the Institute for Workplace Skills and Innovation. (Wyman 2015). Arguing that ‘vocational education is smarter than you think,’ Wyman says that ‘the focus on college preparation often fails to make one important connection: the connection between school to the world of work.’ Wyman here is talking about work that does not require an academic qualification, yet benefits from in-work experience and along the way gives workers the social skills they need to thrive in a work environment. But the principle can be applied squarely to hybrid models at universities. If we want our students to succeed in the workplace, they need to know how that workplace operates – it is not simply a case of transferring academic knowledge, but adapting it.

The fourth key advantage is an **enhanced experience**. Hybrid models can stimulate students’ learning by being modular: one-on-one sessions one day, maths on another, visiting lectures on a third. The approach might be a linear stream, rather than a series of courses. Consider TEx, an initiative by Texas University. The ‘Total Education Experience’ enables students to learn ‘through simulations, team-based projects and clinical experiences.’ Ensuring that the content can be delivered by mobile phone – ‘to meet students where they are, with the technology that they are used to,’ according to Marni Baker Stein, chief innovation officer of the Institute of Transformational Learning, ‘a student’s path through a course is automatically personalized to his or her needs and learning style.’ (LaCoste-Caputo, Jenny & Adler, Karen, 2014.)

TEx is the kind of innovation that makes the delivery of hybrid models a reality. ‘Beyond fully online courses, TEx is designed to support a wide range of innovative teaching methods in classrooms, laboratories and in the field that ultimately will provide richer and more accessible content for students while preserving the quality of a UT degree.’ In other words, personalisation enabled by technology – a compelling proposition for today’s graduates.

### **How Far can the Disruptive Model be Taken?**

It’s too much of a leap from seeing the benefits of hybrid models to ask if we still need universities at all, but as a rhetorical question it is interesting to pose. Campus models are based on the principle of scarcity (Smith, 2014). In an age where reams of information are available at our fingertips online – ‘abundant information,’ as Smith defines it – is there a need for students to attend classes at all? ‘Abundant information – in its many, divergent forms and uses,’ Smith adds, creates ‘a new ecology’ that consists of ‘three big changes, unleashed by technology and the global economy, which affect education. They eliminate scarcity as we have experienced it.’ Two of those changes are ‘unlimited content and unlimited access.’

The rise of MOOCs bears witness to this shift in thinking. Many – but by no means all – of the courses described as competency-based are purely online offerings. But although MOOCs can offer outstanding learning opportunities for those unable to attend university courses (whether for reasons of finance, location, disability, family circumstance or other reasons) the evidence

consistently indicates that without an element of classroom-based learning, students will not reach their full potential. A similar point can be made about coding bootcamps. They work best as a top-up; not a replacement.

Perhaps the most obvious argument against Smith's 'abundant information' model is that someone needs to curate that information, make sense of it and teach it, in ways that are absolutely no more or less central to student success than they were before the internet developed. Students can access huge amounts of information and universities no longer have the monopoly on scarcity. In fact, there's no such thing as scarcity any more. The problem now is different. It is that there is too much information, and the academic institution's role thus becomes that of shaper and guider.

Institutions that can offer a mixed portfolio of lecture, seminar, online add-ons and in-work placements are best placed to meet the needs of both students and companies; needs which fluctuate depending on the individual student and individual organisation. For technology companies in particular, there is the added complication that there will inevitably be a time-lag between what is taught on a university course, and what businesses need their graduates to know when they start work – simply because of how quickly technology changes.

### **Ensuring the Student Finds a Career at the End of the Process**

The answer to the deliberately provocative question 'do we still need universities' is to challenge the disconnect between the university experience and the job offer at the end of the process. Ryan Craig quotes Mike Fishbein, a marketing guru who has discussed what such 'full-stack' education companies might look like. 'Fishbein's view is that the goal for the end-user is not a quality educational experience, but rather a job: "Jobs are the top of the education stack." According to Fishbein, "a full-stack education company might not look like a school at all. It could look like an employer, a lender, a school, and/or a recruiter all rolled into one" – because the point is to provide all services required to get the student a (better) job.' (Craig, 2015:3.)

In other words, 'if you're going to go to the trouble of creating a product to improve higher education, and if you're going to devote your life to a company to advance that product, you might as well make sure the student gets a job at the end of the day.' Otherwise, the *experience* of university is all the student is finally being rewarded with. In an age of increasing fees and commoditisation, that's where many universities are, it could be argued, heading in the wrong direction, exposing themselves to attack from vocational courses and MOOCs as a result.

For Craig, the key is to link performance to the job offer. 'Expect to see some colleges offer a performance-based value proposition: pay tuition only once you achieve the desired outcome. For most students, that means a job – either a new job or a promotion, but definitely higher remuneration than the status quo.' (Craig, 2015:3). This kind of performance-based college will be, for Craig, 'a full-stack higher education enterprise in that it will take a strong interest in what you study, and in making sure you get the job.'

### **Financial Benefits**

There's one more key benefit that hybrid models bring. As fees rise, higher education 'is increasingly being commodified, and its access restricted'. (Miller, 2013.) Many students begin to feel priced out of the market, and higher fees can in some cases prevent highly able and gifted students from participating in the higher education that they deserve. Miller quotes stark figures; 'in the last ten years, tuition and fees increased 66 percent beyond inflation at public four-year institutions and 26 percent beyond inflation at private not-for-profit institutions' (figures based on US institutions). 'Nationwide, total student debt has surpassed one trillion dollars and the average student with debt owes about \$26,600.'

Hybrid models can disrupt these ballooning figures, as they can be more **economically viable** by running on a lower cost base than traditional, exclusively campus models. The model at College for America envisages education as an 'on-ramp'; 'to more stable work, an on-ramp to further study.' College for America focuses on working adults, who according to LeBlanc are 'the majority of today's college students' but who are 'often least well-served by the traditional higher ed industry.'

Students have changing expectations from their learning providers, and businesses want changes too. There are key opportunities for hybrid models to steal a march in the new competitive age by giving learners, and organisations, offerings that are more attuned to their needs.

### **Case study: European Leadership University**

An example of using disruptive innovation to rethink tertiary education provision is the European Leadership University (ELU). Its founding premise is to argue that traditional organisations cannot disrupt themselves; rather, new organisations need to do this. ELU focuses on education to employment (E2E) – a key part of the McKinsey recommendation – instead of a focus on research, which many traditional universities are still modelled on.

E2E facilitations, we would argue, lead to a better fit between students and the job market. 'Disruptive innovations often represent a simpler, more affordable, and more convenient products and services' (Christensen, 2014). ELU focuses predominantly on two of these key disruptive innovations in education: strong co-operation with businesses to make education relevant for the job market (such as developing apprenticeships), and digitisation of education leading to better accessibility and new student types.

The university focuses on getting students into work by offering competency-based education. The learning outcome is fixed, but the time spent is variable: students cannot move forward until they prove they master a certain competency. We argue that the value of competency-based education for companies is huge. By ensuring your employees master a certain skill, you spend less time on training and you are more quickly equipped with a workforce that is fit for purpose. There is a strong positive social element to this too – much of the value of competency-based education lies in the largely untapped market of people who currently do not fit the traditional education system, due to lack of time, finances or other resources. (Christensen, 2014). We believe strongly that education should focus on a broader, more diverse group than has traditionally been the case. By means of asset-light campus models, ELU finds it important to look beyond Europe and contribute

to education globally. It places particular focus on students in developing countries, enabling them to access quality education in ways that previously may have been hard for them to reach.

In practice, programmes are flexible – tailored to the students’ need; stackable – by allowing credits transfer towards a higher education; and validated – by industry and corporate partners.

This emphasis on working directly with employers is, we think, essential to future success and the key area where traditional universities do not pay sufficient attention. The goal is in ten years to create 10,000 jobs from teaching 100,000 students.

### **Traditional Universities will Respond as well**

The rise of hybrid universities will not disrupt the role of traditional providers to the point of extinction. But there is a clear agenda for change, and successful traditional providers in the future will be ones which respond flexibly to the changing environment. The key element is simple to suggest, but hard to do in practice. It’s essentially for learning organisations, businesses and students all to **engage** with each other more.

The McKinsey research suggests several desirable outcomes – all from the top-line points of universities, businesses and students needing to communicate with other more effectively, collaborate more and stop seeing university education as a linear process where the ‘job offer’ only comes at the very end.

In essence, the way forward as suggested by McKinsey can be described as follows:

- **Have new incentives and structures.** Stakeholders need better data to make informed choices and manage performance. Give data to students and parents about career and training options.
- **Offer more workplace data.** Information about what happens to students after they graduate is not routinely offered by learning organisations – it could and should be. What are the job placement rates? How long does it take students to get to an average salary role? What proportion of graduates reach high salary roles?
- **Connect more effectively with business.** Transformative solutions involve multiple providers and employers working within a particular in industry or function. These collaborations solve the skill gap at a sector level; by splitting costs among multiple stakeholders (educators, employers, and trainees), investment is reduced for all.
- **Take a high-level view of education.** In practice, this might mean creating the role of a ‘system integrator’, who works with education providers and employers to develop skill solutions, gather data and identify and disseminate positive examples. The integrator can be defined by sector, region, or target population. (McKinsey, 2015).

To this we could add: **encourage students and parents to self-inform more.** The internet is full of information, but it can be hard to track down *helpful* information. Instead of allowing students to go to learning organisations largely in ignorance of job expectations and in the dark about what their futures might be, help them to think more strategically about their careers from an early age.

That will help them choose their course in an informed way, plan their student years more effectively and have an eye on what they want their key outcomes to be when they graduate.

The conclusion from the McKinsey work is that **successful programmes do things differently**. They ‘step into each other’s worlds’. Employers might help to design curricula. They might offer their employees and faculty, and they might let students spend as much as half their time on job sites. They might then get them hiring guarantees. The best programmes work with their students early and intensely. They avoid the linear obstacle-path of enrolment, skill-building and job offer by treating the education-to-employment journey as a ‘continuum’ in which some employers even commit to hire youth before they are enrolled in a programme to build their skills.

Finally, to adapt the structures of traditional business education to a more fully-aligned model. Get students to spend more time trailing employees in organisations. Integrate internships as part of the degree, not an add-on or something for graduates to organise for themselves once they leave university. Have more in-university training, as well as academic education. Have more lectures from organisation employees during the course of the degree – current doers, not people who used to be doers or who watch others doing.

As a result, education will be a less passive experience. It will be the platform from which graduates can step seamlessly into their first role; not a launching pad that requires a leap of faith that can seem daunting and hard to attain for many of today’s students. This is achievable if not straightforward. Tomorrow’s students will, increasingly, demand it.

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