

Advanced Business Models in International Higher Education

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Edited by

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INTRODUCTION: FACING CHANGE AND CHALLENGE IN AN ERA OF CREATIVE DESTRUCTION

JESSICA LICHY AND CHRIS BIRCH

Higher education has, throughout history, faced radical changes and challenges in various forms and amplitude. At the time of writing, *The Economist* (2014: 11) talks of “creative destruction”, a term referring to the rising costs, changing labour markets and new technologies that will irreversibly shake the system. An increasing number of individuals will follow some form of educational programme over the next couple of decades: more people combined than in all of human history to date. Most of the capacity to accommodate this demand is yet to be developed, and much of it will be created in the global online environment. The shift in what is currently ‘valued’ in higher education (towards a knowledge-based economy) is driving the need for new business models: “Strategic differentiation, focus and client alignment has become dramatically more important” (Kennie and Price, 2012, p.15). This Special Issue presents the thinking of researchers and academics from IDRAC Business School and partner universities regarding the new stakeholders in higher education systems and structures, and the kinds of business models which are needed in order to offer a sustainable value proposition.

As the pace of change accelerates, higher education providers need to redefine their strategy to ensure sustainable success. The articles presented in this Special Issue provide an insight into various changes taking place in higher education institutions (HEIs) and their respective responses to these changes. The authors in this collection of articles highlight the belief that pervasive technology and ubiquitous Internet access have transformed higher education, putting pressure on HEIs to review their traditional approach in order to deliver anywhere, via any ware, at any time.

It is often said that we are living in a knowledge-based economy, as though this were a new phenomenon. Arguably, so too were those who lived through what we now refer to as the Industrial Revolution of the late

eighteenth and nineteenth centuries. It is likely that historians of the future will look back and judge that we are today living through another revolution, driven by new technologies, discoveries in medical sciences, emerging global markets, instant mobile communications and increased digitization. The models of higher education which marched triumphantly across the globe in the second half of the twentieth century are now in need of radical and urgent transformation. The impact of massive change on our everyday lives is colossal, yet perhaps we are too close to see this. What is different now is the rapid pace of change. Undoubtedly, this is the challenge that we now need to recognize and reflect upon in relation to the underpinning support structures and infrastructure of our societies.

Many articles have been written, policies developed and strategies refined relating to the current changes taking place in higher education. Much has been said about the need to update teaching and learning, in order to maintain future competitiveness and standards of living. HEIs worldwide are under pressure to provide education that leads to employment. Academics and researchers have a critical role to play in society; the onus is on school managers to integrate a philosophy of employability, to support SMEs to be smarter, and to be more innovative as communities of learning. Both the popular press and academics have initiated debate around the changes taking place and the effectiveness of current business models in higher education. The weaknesses of the current system have been exposed and discussed at length, the general consensus being that a break with the past is needed. Now is the time for systemic change and development, to prepare learners for the unchartered and uncertain world ahead. But ... are we ready, able and willing to oblige?!

References

- Johnson, M.W., Christensen, C.M. and Kagermann, H. (2008). Reinventing your business model, *Harvard Business Review*, (December); 50-60
- Kennie, T. and Price, I. (2012). Disruptive innovation and the higher education ecosystem post-2012, *Leadership Foundation for Higher Education*, (February).
- Osterwalder, A., Parent, C. and Pigneur, Y. (2004). Setting up an ontology of business models. In *Proceedings of 16th International Conference on Advanced Information Systems Engineering (CAiSE03) Workshops (3)*, 319-324

Sinfield, J.V, Calder, E., McConnell, B., Colson, S. (2012). How to Identify New Business Models, *MIT Sloan Management Review*, (53)2, 84-90

The Economist Print Edition. (2014). *Creative Destruction*, June 28th

USING BUSINESS MODEL STEREOTYPES TO EXPLORE STRATEGIC INNOVATION IN HIGHER EDUCATION

VICTOR NEWMAN

As the global market for Higher Education evolves and grows, HE organizations' ability to adapt and perform in a fast-moving global economy will be at a premium. It could be argued that the idea of business models' (BM) application within the HE context will be problematic for reasons such as a lack of shared understanding of what BMs can usefully do, absence of standardization of BM architecture and terminology, and academic cultural resistance to an emerging political expectation that academic excellence within sectors of the HE industry is a potential driver of economic power and wealth-creation, and perhaps too important an issue to be left to HE institutions. Chesborough's observation that inflexible BMs have a prophylactic effect on innovation means that leaders in organizations need to develop the capability to innovate BMs to deliver new value, instead of rejecting innovations that don't fit their current legacy model.

The purpose of this paper is to take a collection of archetypal business models, applying them to the HE context to discover their potential as a source of innovation for delivering current and new value and as the foundation of a potential future BM "playbook" for influencing agile and adaptive HE innovation practice.

The HE Innovation Context

This paper attempts to inform discussions on the impact and potential for strategic innovation within the context of higher education (HE) through developing new business models. Each day brings new stories of entrepreneurial innovation within the context of education and HE in particular via the internet. Often, when carefully examined, these stories suggest a pace of change that is more glacial than frenzied. Thus, in 1969,

in the same year that the Open University was founded as the world's first distance-learning university and later began delivering courses in partnership with the BBC, Nelson Mandela began his incarceration on Robbin Island and commenced studying for his law degree via postal correspondence.

What is surprising (technologically) is the slow emergence of new, or at any rate different, education models via the postal system. It was followed by the wireless, and more recently the internet, as a service that can potentially compete with the educational establishment in challenging both the traditional system of site-based, co-located, face-to-face, oral teaching or content delivery and social reinforcement via lectures, seminars, tutorials, and the powerful educational publishers' strategic position as suppliers of educational content via textbooks (Pearson/ FT).

What does seem to be happening currently is in the nature of an open land-grab, where consumers may benefit from a commoditisation of education, and its extension into the developing world where a new class of consumers serving growing economic powerhouses are emerging and purchasing new technologies for communication without the encumbrance of traditional legacy models attempting to block change and retain control. This commoditisation revolution may not destroy established HE brands, but will certainly disrupt late adapters and lead to agile new entrants to the emerging reality, a revolution that is probably driven by the elegant example of the iTunes business model that is both a means of aggregating transactions, taxing them and disintermediating competitors at the same time.

The current evolution of 'iHE' (internet-driven HE) is very much influenced by, and at the same time modelled upon, this Apple approach to doing business through selling HE transactions directly to customers to consume via the internet. Of course, the key difference is that traditional HE tends to involve a series of transactions which are mediated in delivery as well as consumed, and whilst the analytics of those transactions are aggregated and interpreted to connect consumers with similar products (actively reconfiguring customer segments in real-time), few transactions or products are being commissioned to fill current gaps in supply. However, it is the elegant logic of iTunes that draws investors into engineering new and similar business models in iHE, even if the actual size of the market sector (as a global market) may be limited. However, if we had a global HE market model, even the iHE market sector would be

significant in terms of aggregated volume, and this would require the development of appropriate BMs to capture other attractive market segments as well as evaluating them to know which ones to exploit, or avoid.

Strategy and Business Model Innovation

Chesbrough's (2010) exploration of the barriers to BM innovation restated the obvious, that BMs are the means by which companies commercialize new ideas and technologies to realize an appropriate return on investment, and that while organizations may have "extensive investments and processes for exploring new ideas and technologies, they often have little if any ability to innovate the BMs through which these inputs will pass"... that "the same idea or technology taken to market through two different BMs will yield two different economic outcomes. Chesbrough in effect restates Goldratt's (1993) observation that no process can go faster (or accept inputs) than its narrowest bottleneck will allow and so it makes good business sense for companies "to develop the capability to innovate their BMs". In other words, innovation capability includes the ability to innovate ideas, technologies and BMs (and that these will tend to be seen as disruptive innovations in terms of those hosting the legacy BM). That innovative ideas need innovative BMs, and the ability to productise an idea into a product or service, requires BM architectural skills. Chesbrough illustrates this point with the examples of 3Com and Ethernet, Radiohead's "pay what you like" download strategy for achieving volume sales, and Johnson and Johnson's Velcade multiple myeloma drug "pay by results" BMs in changing the rules for realising value in a supposedly inflexible marketplace.

At this point, it becomes obvious that if institutions within the HE industry are to survive by defending their current portfolio, responding to global pressures to commoditise by reconfiguring the delivery of HE products and services, or even anticipate the future direction of HE as an industry, then becoming BM-literate and understanding BM architecture will be a HE leadership pre-requisite in order to model new BMs experimentally before adoption. An appropriate approach to BM mapping or modelling is Osterwalder and Pigneur's (2010) method for explicitly visualizing the key processes that compose a high-level but functional BM.

BM Expectations and Requirements

The BM as a term serves as a token by authors of an intention to construct a model of a situation – and not a specific technique like QFD, idef0 or Costs of Poor Quality. All it offers is an attempt to “model” or capture the essential nature of the way a business is designed or has developed to deliver value without suggesting that the “model” or representation is optimal. It often involves some attempt at influence diagrams to represent dynamic relationships systemically. There are few standards and only relatively recently an attempt to objectify the approach in a uniform manner which as Casadesus-Masanell and Ricart (2010) observe, enables both aggregation and decomposition.

In other words, a systemic type of BM which is simple enough to enable aggregation in zooming-out to see the big picture and the larger, visible interactions, and yet also complex enough to enable decomposition by zooming-in to focus on key elements or building blocks in isolation and examine them in detail. A system of modelling the way a business creates and delivers value to customers needs to be both simple at a high level and potentially complex at a tactical level, because the use and application of business models in HE is likely to be an innovation, even in a business school, and as such, is going to involve social and political change as a culture carrier for alternative possibilities and require a deep level of detail to satisfy critics.

Simplicity is useful when teaching audiences about the power of current business models of organizations they may be familiar with, but essential when trying to apply a business model to oneself or engaging participants in modelling their current realities. A successful system of modelling business should also provide a robust and shared language that enables analysis, synthesis and insight through the playful manipulation of aspects of business models to generate and consider novel strategic alternatives. As Osterwalder and Pigneur helpfully observe, “without such a shared language it is difficult to systemically challenge assumptions about one’s business model and innovate successfully.”

An important question to answer will be: who generates the new business model? Ideally, business models should be co-created in order to build ownership and internal diplomacy, but this could be used as a means of obfuscation and sabotage. Similarly, a suitable HE business model (HEBM) could involve forms of innovation around curriculum content,

pedagogy (new ratios of social engagement to digital delivery and support), staff utilisation, status and reward systems.

Successful implementation may require a deep systemic crisis that cannot be ignored, involving refocusing on specific customer segments and abandoning others, requiring closure of the old organization and designing a new organization in order to enable the new HEBM to succeed. The future shape of HE is going to involve a tension between the past and the future, involving agility, adaptability, knowledgeability, intense customer insight and the ability to operate within several BMs at once.

Osterwalder & Pigneur's BM Generation Approach

In Osterwalder's BM Canvas or template (BMC) the 9 BM building blocks within the four main areas of business are composed as follows, as in Figure 1: Osterwalder & Pigneur's BM Canvas.

The Offer Area is otherwise known as the Value Propositions or "the bundle of products and services that create value for a specific Customer Segment. The Value Proposition is the reason why customers turn to one company over another. It solves a customer problem or satisfies a customer need. Each Value Proposition consists of a selected bundle of products and/or services that caters to the requirements of a specific Customer Segment. In this sense, the Value Proposition is an aggregation, or bundle, of benefits that a[n] organization offers".

The Customers' Area includes 3 of the remaining 8 BMC building blocks: Customer Relationships (CR), Customer Segments (CS) and Channels (CH).

The Channels (CH) block outlines how an organization reaches its Customer Segments (CS) to deliver a Value Proposition (VP). The Customer Relationship (CR) block categorizes the type of relationship an organization builds with specific Customer Segments, where the Customer Segment (CS) block identifies specific groups of people or organizations to influence and serve.

The Infrastructure Area includes 3 of the remaining 5 BMC building blocks: Key Partnerships (KP), Key Activities (KA) and Key Resources (KR). The Key Partnership (KP) block captures the network of necessary suppliers and other partners that make the business model operate. The Key

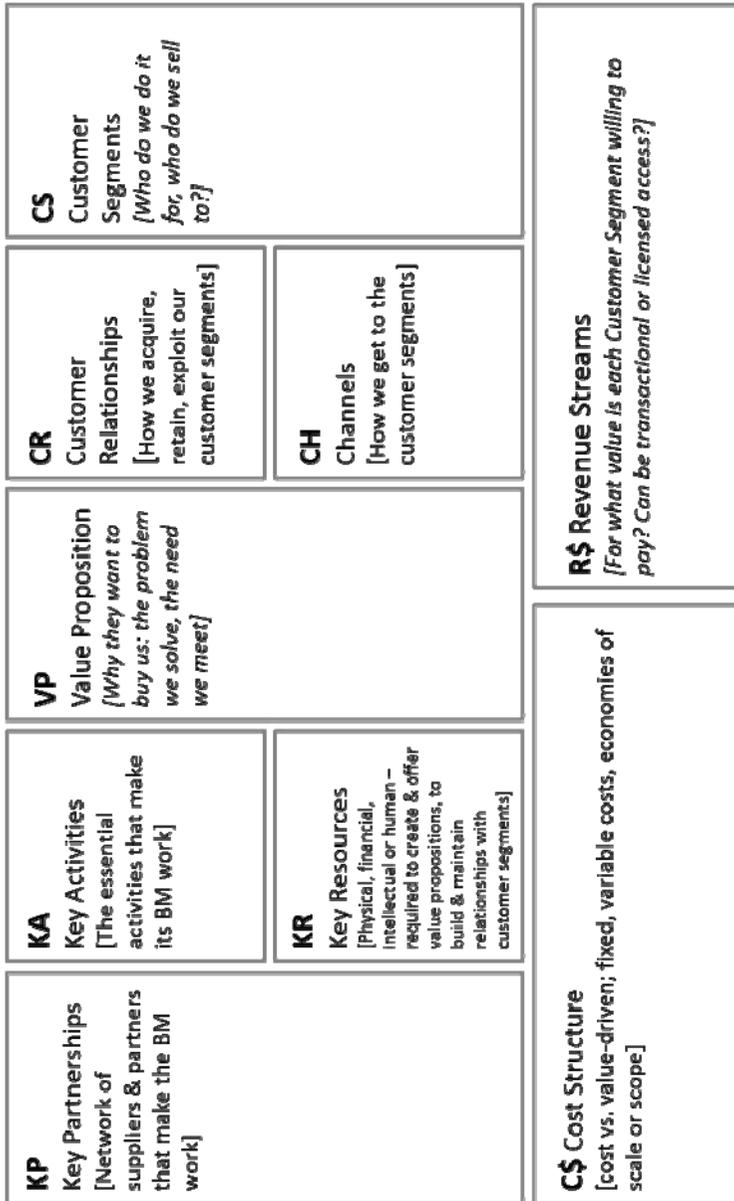


Figure 1: Osterwalder & Pigneur’s BM Canvas

Activities (KA) block details the essential activities and the Key Resources (KR) block identifies the essential assets involved in making the BM function effectively.

The Financial Viability Area hosts the last 2 remaining BMC building blocks: Revenue Streams (RS) and Cost Structure (CS). The Revenue Streams (RS) block quantifies the cash an organization generates within each Customer Segment (where costs are subtracted from revenues in order to quantify the level of earnings), and the Cost Structure (CS) block details the most important costs involved in operating the BM.

The great advantage of the BMC is its simplicity and generalizability, in other words it is simple enough with its 4 areas and 9 building blocks to characterize most situations to enable *aggregation* (zooming-out/ big-picture thinking) and *decomposition* (zooming-in to think in detail). However, there are several weaknesses or gaps in its design: firstly, attempting to keep everything on one canvas, when it needs a BMC prerequisite or prequel in the form of a Value Proposition Hypothesis (VPH) to capture the dynamics of the hypothesis about how value is created with whom (in other words, a Value Proposition Hypothesis that expresses what is believed to be true about choices that inform the strategic design and consequences that are anticipated as a result). Recently Osterwalder and Pigneur (2014) have attempted to fill this vacuum by supplying a Value Proposition Canvas connecting customer pains and gains with appropriate products and services via their BMG website. The second major weakness or blind-spot is the issue of the power of branding, which needs special treatment and analysis.

Alternatively, one way of representing this simply is to modify Cadesus-Masanell and Rocart's (2010) Ryanair Choices & Consequences table, into a workable BM Value Hypothesis (VPH).

The famous Ryanair no-frills (pile 'em high, sell 'em cheap and fast) strategy was an adaptation of Southwest Airline's BM for the US market, considering 4 strategic options for escaping bankruptcy in 1991 as described by Rivken (2000), wherein the options were either to a) exit the airline industry, b) copy competitors by adopting business class, c) intermediate by becoming a "feeder" airline out of Shannon, or d) adopt the lean Southwest BM approach.

Strategic Design	To profitably gain & build customer share by simplifying service and reducing complexity.	Emergent Customer	Customer sees the flight journey as means to an end, as incidental in terms of getting to and from the destination.	Ryanair BM Design Features	Ryanair BM Benefits	Ryanair BM Risk
				<ol style="list-style-type: none"> 1. Short-haul flights 2. Secondary airports 3. Lowest ticket prices 4. Low commission to travel agents/ disintermediate via web 5. Standardized fleet 737s 6. Single passenger class 7. High-powered [management] incentives 8. No meals 9. Nothing free 10. Spartan headquarters 11. No unions 	<ul style="list-style-type: none"> ▪ Reduced exposure to crowded aircraft ▪ Low airport fees ▪ Large volume ▪ Low cost ▪ Bargaining power with suppliers ▪ Economies of scale ▪ Attracts combative team ▪ Faster turnaround ▪ Additional revenue ▪ Low fixed-cost ▪ Flexibility in rostering staff 	<ul style="list-style-type: none"> ▪ Customers feel like cattle and staff become alienated. ▪ Secondary airports may involve expensive and unreliable transfers that reduce ticket price savings. ▪ Single aircraft dependency. ▪ Secondary Airports raise fees.

Table 1: Ryanair Value Proposition Hypothesis

Applying VPH thinking to Ryanair's BM includes 5 essential interconnected elements as detailed in Table 1: Strategic Design (what were we trying to do?), Emergent Customer (who wanted it?), Design Features (what did we deliberately engineer into the VP?), and the Benefits and Risks involved (what was working for us, and what negative elements might appear?) in order to demonstrate how a deliberate strategy of simplification and variety-reduction can confer advantage in attracting a certain type of customer.

What is interesting at this point is the often-neglected issue of value which can either be understood in terms of added-value or New Market Value. Added-value is the balance of financial value of a product or service remaining when the costs of conformance (the costs of designing and running a system to keep failure out) and non-conformance (the costs of managing failure when it has occurred) are removed (McMillan, 1991). Whereas New Market Value is a qualitative concept that describes the shift in value of similar products in a market when an innovative product is introduced. This New Market Value is always relative. This can either be through marginal differentiation as in eco-cars based on non-fossil combustion systems of rechargeable batteries (even though the energy used to charge them may be fossil-based) or so-called *em*-fitted but conventional cars designed to reduce the potentially powerful cumulative impact of unshielded electro-magnetic fields generated by the car operating system upon the driver's autonomic system (influencing their ability to think clearly and safely), similarly the driverless, autonomous Google Car. Added-value and New Market Value are complementary concepts. Obviously, even for products that introduce high New Market Value, the issue of maximising added-value is important in order to reduce waste and generate profits for reinvestment and stakeholders.

Once the issue of having a useful BMC or BM template is negotiated and the need to complement it with a logical VPH, the next interesting piece is to examine the generic templates supplied by Osterwalder (and others) and consider the implication of putting them into the HE context as a form of innovation exploration, i.e. deliberately triggering creative thinking through the use of analogy or metaphor, where the BMC acts as a means of using Strange/Familiar Synectics provocation thinking approaches, wherein a familiar problem is approached with a strange technique, and a strange problem is approached via a familiar technique to trigger insightful thinking (VanGundy, 1988).

Exploring with Osterwalder & Pigneur’s BM Archetypes within the HE Context

What follows is a brief introduction to key ideas or archetypal business model-related concepts explored in Osterwalder & Pigneur’s Business Model Generation handbook.

Unbundling BMs to Explore 3 Business Types

Before introducing their BM templates featuring “The Long Tail”, “Multi-Sided Platforms”, “Free” and “Open” BMs, they usefully introduce 3 “Core Business Types” influenced by Hagel and Singer’s “Unbundled Corporation” (1999) where un-bundling (or visualising 3 out of the 4 bundles or areas of the BM, the Offer, the Customer and the Infrastructure as separate but complementary businesses can help to resolve the problem of contradiction or tension by treating them as separate entities or operations of the following type:

- The Offer Area becomes a Product Innovation business that focuses on developing new and attractive products and services (and even new business models).
- The Customer Area becomes the Customer Relationship Management business which finds, attracts, acquires and retains customers.
- The Infrastructure Area becomes the Infrastructure Management business constructing and managing high-volume transactional platforms.

This unbundling, or area focus, complements the BMC model in that the Offer Area or Value Propositions block (VP) maps with the Product Innovation business, the Customer Relationship Management Area maps with the CR (Customer Relationships), CS (Customer Segments) and CH (Channels) blocks and the Infrastructure Management business maps with KP (Key Partners), KA (Key Activities) and KR (Key Resources) blocks. Un-bundling into these 3 types offers a potential hierarchy of BMs, implying either the options of legally and financially unbundling these businesses, or merely appointing MDs to each and managing the political and economic integration through governance and perhaps at least 3 levels of BM (corporate, business and functional unit) involving a corporate top-level BM where 3 sub-level BMs are defined for each of the 3 unbundled

business types, wherein the 9 blocks within each unbundled business type have their own functional unit BM.

There are interesting implications for HE in such unbundled BMs. Taken in reverse order, the Infrastructure Management business could involve a deliberate strategy of building and managing capacity and becoming an open broker of content on a global scale. The Customer Relationship business could top and tail the Infrastructure Management business in building relationships with new customers by becoming a strategic partner with governments, global businesses and key customer trade segments to anticipate and define current and emerging markets for products and services. Finally the Product Innovation business could be engaged in constructing innovative Knowledge Products which could either be tactical or strategic in implication (like perhaps a philosophical replacement for lean thinking), as well as repackaging legacy products into new configurations. The key issue is that such unbundling would enable focus, but would also require integration in order to succeed across all 3 businesses.

The Long Tail

The unbundled Infrastructure Management business discussed previously, and its potential to operate as a broker of content or transactions translates into Anderson's (2008) Head and Long Tail curve of volume vs. variety model, whereby the eponymous right-sided "tail" describes a graph wherein the vertical axis measures the percentage of sales, and the horizontal axis measures the number of discrete products. Anderson's Long Tail model seems to be a reworking of a cliff-like Pareto histogram. Thus the left-hand end of the curve (nearest the vertical) or the "Head" is tall but narrow, denoting a high percentage of sales of a few products (Pareto's 20% by volume delivering perhaps 80% of income or profit), and the long right-handed "Tail" features a large number of products selling in smaller volumes that literally tail off to the right (Pareto's balance of 80% of volume delivering perhaps 20% of income or profit). A very important point to note is that the area of the tail tends to match the area of the head (and thus makes it potentially worth exploiting) in his version of the diagram.

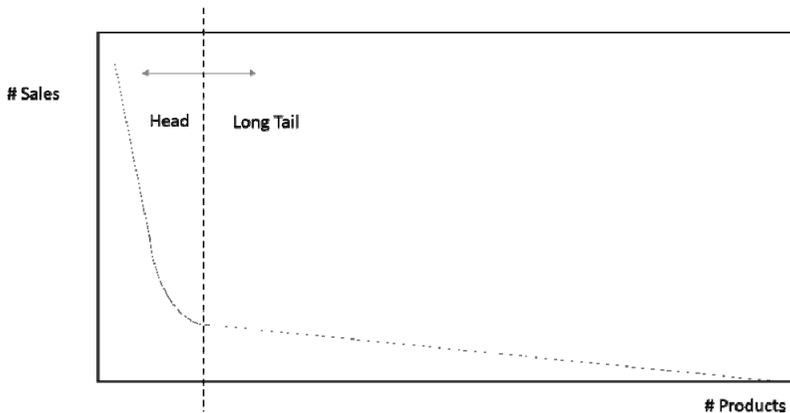


Figure 1: Anderson's Long Tail Model

Anderson originally contextualised his Long Tail model within the emerging digital media industry with its triple democratization enabled via search-engines, and social media to find esoteric products, democratization of tools of production and the democratization of distribution via the internet. The last two features enable low inventory, reduced transaction costs and the potential via social media for a unique product to either become a viable and scalable product through global (and not just local) market access, or to ride a trend and become mainstream. According to Duke (2013) it is the promise of the scalability of a Long Tail HE strategy that has driven the recent surge in investment via Silicon Valley venture capitalists in “game-based complex software to design lessons for an individual’s needs [presumably via front-end learning diagnostics and real-time evaluation] and to provide instantaneous assessment of pupils’ performance”, plus the potential of replicating Amazon’s ability to identify emergent patterns of consumption to connect users/ consumers/ learners with related (hidden) material to build demand. This has also led to the Open University’s audacious experiment in FutureLearn (the UK’s first MOOC course platform) with an intelligent infrastructure to host smarter interaction with learners whilst providing scalable learning experiences. The key to a successful HE Long Tail BM is going to be the establishment of an open infrastructure platform with workflow disciplines which enable rapid curriculum productisation, similar to those used in disintermediated publishing (like Blurb.com) via:

- Smart content writing via fast adaption by authors to populate smart learning templates,
- Intelligent pricing strategies to encourage product and content creation,
- Cut and paste media management to keep materials fresh with recent examples and alternative ways of explaining the same thing to different audiences,
- Traffic analysis to identify a product that is going to move out of niche into mainstream,
- Theme-spotting or opportunity identification to specify the opportunity, rapidly define it, break it into chunks of curriculum, identify useful experts and appoint editor content leaders to put it all together.
- Fast prototyping capability.

Multi-Sided Platforms: Free and Open BMs

Multi-sided platforms bring together “two or more distinct but interdependent groups of customers. Gibney (2013) points out that they create value by connecting these groups. Obvious examples include credit cards which connect consumers to merchandisers, operating systems connecting users of computers with PC manufacturers, newspapers connecting readers with advertisers, and Google connecting advertisers to consumers.

The key issue for multi-sided platform BMs is the “chicken and egg situation”. In other words, the construction or acquisition of a viable population to generate a sufficiently large volume of transactions that can be taxed to generate profit. Relevant examples include Metro, a free commuter daily newspaper that enables companies to advertise their products and services to the commuter market segment; and MOOCs (Massive Open Online Courses) offering free tuition (presumably this means access to structured content without mediated social interaction) provided by universities to hundreds of thousands of students. Whilst MOOCs are free to consume by students, accreditation must be paid for. Thus MOOCs are “free” multi-sided platforms, the equivalent of Gillette’s free razor offer, or LinkedIn’s basic membership, acting as a low transactional cost portal to showcase products to pull convinced consumers into a deeper relationship and convert them to pay for differentiated services at premium prices.

The alternative to a traditionally-closed BM is to adopt elements of an open BM whereby a business accepts the possibility that it doesn't know everything, nor employ the smartest people, and it could learn from others. As Chesbrough (2006) put it “shorter product lifecycles and accelerating costs spell doom for the older, closed model of innovation. Only by accessing more ideas, and by using these ideas in more new products and services, can organizations keep pace and achieve an economically viable model of innovation”. Such an open BM is implicit in the original unbundling discussed at the beginning of this section, in the adoption of the Open Broker strategy based upon a smart learning infrastructure BM.

Putting It All Together

There are some simple rules for this emerging world of HEBM that go back to the first unbundling exercise:

1. Having great content is not enough, even if it is innovative it can be hidden within publications and books and inappropriately structured for audiences that could consume and use it to create value.
 - a. How many current staff are merely recycling old material and how few are thinking genuinely new thoughts that are relevant?
 - b. How many HE organizations are consciously applying Knowledge Leadership principles to the context of the new global internet marketplace for HE to generate new content and new curricula?
2. Having a great infrastructure, even with smart learning analytics but without great content will require an open BM to source materials plus require a “freemium” strategy to populate it with potential users for conversion to premium services (and a reasonable rate of conversion). This will probably involve a strategic partnership with either Google and/ or Cisco.
3. The first 2 rules, if established, can enable the third complementary rule which is their dependence upon a Customer Relationship Management business with the ability to operate as a genuinely honest open broker for HE content and a customised learning process. If such a relationship is established with real trust and agile sourcing, then customer insight can lead to the

specification and construction of great content and can be delivered to meet the customer's needs and the role of becoming a trusted strategic partner to key corporates and national governments of emerging economies.

It has been the author's experience both as an internal and external curriculum broker involved in setting up internal corporate universities and identifying external thought-leader and subject-matter expertise to meet strategic and tactical requirements for delivering corporate strategy, that it is rare that one HE institution serves a one-stop shop for all corporate requirements. Thus, in spite of Harvard's one-size-fits-all and Stanford's you-can-have-it-your-way-as long as you buy it here, innovative companies are likely under the current HE global economy to source HE with prestigious, branded suppliers.

Conclusion

The HEBM "Killer App" may not exist. But whoever establishes the "gold" standard for strategic educational infrastructure to deliver HE products globally over the internet, which grabs the largest populations via multi-sided platform BMs, and converts them to premium priced transactions, could change the HE market. It is the Long Tail curve which will justify the pursuit of iHE (internet-driven HE) and enable the land-grab of the area under the curve of the tail, the capture of potentially 80% of the product that delivers 20% of the global demand and which, with smart analytics, could convert tail into head products.

But they won't have it all. As Collis (2002) indicates, there will still be a place for premium-priced business education with strong brand associations, especially prestigious MBAs delivered traditionally or supported by internet mediated learning like the Harvard MBA with corporate customers for whom the higher the price, the better the education. There could also be a legal risk to such global leadership via an established strategic educational infrastructure with the perception that it has become a cartel that limits the productivity of knowledge by restricting access.

The narrative has tended to assume that content is merely content, but as Powell and Owen-Smith (2002) suggest, the issue of intellectual property and content management may also become problematical as a global open education market is established whereby authors may control copyright, or

also where university employers may assert partial and/or total ownership of IP as a matter of contractual employment (as in life science businesses) on the basis that, since they have invested in the individual, they deserve an appropriate return on their investment.

The author has attempted to connect the issues of innovation, value-creation and business models within the emerging HE context through the functional Osterwalder and Pigneur BM canvas, made up of 4 bundles and 9 building blocks, to consider the potential, necessary insights to be gained through unbundling, exploring multi-sided platforms offering free, closed and open BMs. The future of HEBMs seems to be strongly connected to the growth of the internet but the jury is out as to whether this will merely democratise content, accelerate its globalisation or merely become another Long Tail HE economy, or whether it will even enable the creation of genuinely new knowledge products. The other issue may be political. After all, if China can negotiate rationing of local content to its population via Google, and establish foreign film quotas to protect its indigenous film industry, then HEBMs will probably have to adapt to provide a mix of foreign and local content.

At the start of this paper, Chesbrough's observation that inflexible BMs have a prophylactic effect on innovation was cited to make the point that, ultimately, HE institutions will have to build adaptive and agile capability. This will require not only the ability to model the current BM, but also the ability to construct, prototype and test multiple BMs to meet the requirements of different markets as they evolve. The Osterwalder and Pigneur BMC is a useful *if incomplete* part of a necessary playbook or toolkit for a new generation of leaders in the HE sector, but it needs to be complemented with an explicit Value Proposition Hypothesis and tools which explore and connect with the power of brands.

References

- Anderson, C. (2008). *The long tail: Why the future of business is selling less of more*. Hyperion Books.
- Casadesus-Masanell, R., and Ricart, J. E. (2010). From strategy to business models and onto tactics. *Long Range Planning*, 43(2), 200-201.
- Chesbrough, H. (2006) *Open Business Models – How to Thrive in the New Innovation Landscape*. HBS Press, 20.

- . (2010). Business model innovation: opportunities and barriers. *Long range planning*, 43(2), 355.
- Collis, D. J. (2002). New business models for higher education. *The City of Intellect: The Changing American University*, 181-202.
- Duke, S. (2013) So Mooc isn't the noise that a cow makes, sir? *Sunday Times*, 1 December 2013, 9.
- Gibney, E. (2013) FutureLearn plans to stand out from Mooc crowd. *THES*, 19 September 2013.
- Goldratt, E.M., Cox. J. (1993) *The goal: a process of ongoing improvement*. Gower.
- Hagel, J., and Singer, M. (1999). *Unbundling the corporation*. *Harvard business review*, 77, 133-144.
- McMillen, N. (1991) *Statistical Process Control and Company-Wide Quality Improvement*. Bedford: IFS Publications, 23-28.
- Osterwalder, A., and Pigneur, Y. (2010). *Business model generation—a handbook for visionaries, game changers, and challengers*. New York: Wiley.
- Osterwalder, A., and Pigneur, Y. (2014).
http://www.businessmodelgeneration.com/downloads/value_proposition_canvas.pdf
- Powell, W. W., and Owen-Smith, J. (2002). The new world of knowledge production in the life sciences. *The future of the city of intellect: The changing American university*, 107-130.
- Rivkin, J. W. (2000). *Dogfight Over Europe: Ryanair*. (B). Harvard Business School.
- VanGundy, A. B. (1988). *Techniques of structured problem solving* (2nd ed.). New York: Van Nostrand Reinhold, 182-3.

THE ROLE OF HIGHER EDUCATION INSTITUTIONS IN SUPPORTING INNOVATION IN SMEs: UNIVERSITY-BASED INCUBATORS AND STUDENT INTERNSHIPS AS KNOWLEDGE TRANSFER TOOLS

ATHINA PITEROU AND CHRIS BIRCH

Abstract

Universities are increasingly expected to develop links with the business community. At the same time, SMEs need to improve their skills and knowledge base so that they can develop their innovation capabilities and improve their competitiveness. Universities and other Higher Education Institutions (HEIs) seek links with large businesses for reasons of prestige and possibly access to funding. Hence, the links between university departments/research centres and SMEs may have been side-lined although they can be beneficial to both sides.

This paper reviews how links between SMEs and academia can foster the innovative potential of SMEs. We focus on two initiatives: university-based business incubators and student internships. Such initiatives enable knowledge transfer from HEIs to small firms while the HEIs benefit from building links with local communities and improving their objectives regarding student employability. University spin-off companies are additional evidence of links between universities and SMEs.

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Introduction

HEIs operate in an increasingly competitive environment where they need to cater to diverse stakeholders. In the UK, employability is emerging as a key concern in Higher Education policy (Pegg *et al.*, 2012-HEA), particularly since the recession and increase in student fees. In addition, research evaluation increasingly takes into account the impact of university research outside of academia. It is suggested that the development of stronger industry links can enable universities to improve the employability of their graduates. However, Karlsson *et al.* (2007) identify that academics working with SMEs face hindrances within existing structures. Simultaneously, SMEs need access to external expertise so that they can improve their knowledge base and their long-term competitiveness. Yet, universities tend to seek linkages with larger firms that are more likely to have an extensive knowledge base of their own. Increased collaboration between SMEs and universities can help foster the innovative potential of SMEs and at the same time enable universities to improve the employment prospects of their graduates. Characteristics of the SME such as size and sector may affect the nature of the relationship to universities. This paper reviews different types of university initiatives which enable knowledge transfer to SMEs. Firstly, we consider the role of university-based incubators/business hubs. University spin-off companies which operate within incubators demonstrate the commercialisation of university research through the establishment of small firms. Secondly, the role of internships in building employability skills and in promoting innovation in small firms is discussed.

University based Incubators: a tool towards effective clusters?

This section discusses how universities attempt to promote small business development through the establishment of business incubators. Such incubators are meant to act as a knowledge transfer mechanism. Business incubators are a particular form of organisation which aims at developing clusters of connected businesses. The concept of business incubators/business hubs is introduced before addressing how the involvement of universities may improve their potential to enable innovation. Examples of incubators established by UK universities are presented to illustrate good practices for their operation. The evaluation of