

DISRUPTING LIBRARIES: THE POTENTIAL FOR NEW SERVICES

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Since the publication of 'The Innovator's Dilemma' in the late 1990¹s the work of Clayton Christensen has been very influential in the business world. In 2008 he caused controversy by applying his analysis to schools.² What is the result when we look at his analytical 'tool-set' in the context of libraries and especially libraries in Higher Education (HE)? In 2004, using Christensen's concepts, David Lewis, of the Indianapolis University Library, reviewed the situation of academic libraries. He argued that academic libraries are the types of institutions that Christensen predicts will fail as they confront the disruptive change that they are facing.³ My intention in this short paper is not to provide a comprehensive guide on how librarians might go about delivering new products and services based on 'disruptive innovation' principles, but rather to point out some fundamental issues they will need to address. In doing so I will use the word 'business' and take it to apply to the library.

What is meant by 'disruption'?

Christensen talks about 'disruptive innovation' in a particular way. His analysis makes a distinction between what he terms 'sustaining' and 'disruptive' innovation. Sustaining technologies *incrementally* improve the performance of *established* products for what Christensen defines as 'high end' or *demanding customers*. Think here of the way Microsoft Office has developed or the upgrades to a Library Management System (LMS). In some cases sustaining innovation can be driven by new and maybe even revolutionary approaches. Open source LMSs might be seen in this context. Nevertheless whilst Open Source Software itself might be seen as a revolutionary or even disruptive concept, Open Source LMSs currently replicate and develop the features of conventional closed source systems.

Disruptive innovation operates differently. Disruptive products and services initially *underperform* established products in terms of functionality. At first sight this might lead one to believe that they will not succeed. However they have other features that make them attractive to users. These are typically around ease of use and cost. For example the Flip is a camcorder reduced to the bare essentials. It has no optical zoom, a small screen that doesn't even flip out, no hi-definition capabilities and no sophisticated editing and special effects features. However it is very lightweight, portable and connects easily to a PC via a flip-out USB connector to provide fast and easy upload to YouTube. It is also inexpensive costing typically less than a third of

¹ 'The innovator's dilemma' By Clayton M. Christensen. Harvard Business School Press. 1997

² 'Disrupting class. How disruptive innovation will change the way the world learns. By Clayton M. Christensen, Michael B. Horn and Curtis W. Johnson. McGraw Hill 2008

³ 'The Innovator's Dilemma: Disruptive Change and Academic Libraries.' By David W. Lewis. Library Administration & Management 18 no.2 68-74 Spring 2004

the price of a mainstream camcorder. Some UK education authorities have purchased the Flip in bulk and teachers and children are taking advantage of the convenience and low cost features to find new uses for a camcorder. This illustrates another key characteristic of disruptive innovation. It appeals to 'non consumers' by finding a market where conventional products do not play.

We can summarise disruptive the characteristics illustrated by the Flip as follows:

- it targets market segments unattractive (initially) to incumbent providers
- it targets users who previously lacked money or skill to use mainstream products. These are the people that were conventionally thought of as 'non-consumers' for this type of product.
- It is 'good enough' for low-end consumers They don't need a full-featured camcorder
- it has a significant cost advantage
- it targets under-served needs such as the ability to quickly and easily upload to YouTube.
- It is simpler and more convenient to use than 'mainstream' products

If we look at services like Google (including Google Books and Google Scholar) we can see some of the same 'disruptive' characteristics at work in the library domain. Despite the fact that such services do not have all the features of a conventional library catalogue (for example in terms of locating and/or reserving locally available, especially print, resources) their advantages in other areas such as ease of use, make them 'good enough' for many users. In his 2004 article Lewis puts it this way: '... consider [the] example of an undergraduate doing a research paper. The student is faced with two alternatives--library resources or the open Web. ... In the past, the library had the clear advantage ... but the Web is quickly catching up. What is important to understand is that more is better only up to a point. If the student needs ten resources for the project and can get ten from both the Web and the library, it does not matter that a thousand relevant items could be found in the library and only ten on the Web. On this attribute, both alternatives have given the student everything needed and wanted. As a result, in making the choice, the student moves on to another attribute. This attribute might be the amount of time required to find the required resources or it might be their availability late at night. On either of these attributes the library is probably much less competitive'.

Users therefore do not see 'disruption' as negative. *They* are not being disrupted. They see easier to use, less costly (in terms of time and effort as well as money) services that meet their needs ---as *they* define them---rather than how the library defines them.

Can librarians deliver innovative new products and services by employing the model of disruptive innovation?

Do libraries need to innovate disruptively?

In his introduction to a 2008 report on the future of research libraries, Charles Henry, President of the Council on Library and Information Resources writes. 'We are in a

transformational period that requires innovation and risk.'⁴ Lewis argued in his paper that there is an important obstacle to successful innovation in libraries. In many HE institutions the library's most influential 'customers' are the academic staff (faculty). These customers typically do not want 'disruptive' solutions. For them the traditional core business of the research library – a strong collection-- is of critical importance. For many other (e.g. undergraduate) users however, competition from wider web based services, including Google, is eroding the position of the library. He goes on to warn that: 'In the end, libraries may be serving only a small number of ...customers without any significant decline in the cost of services. This is not a sustainable position, and when this happens, library services will either collapse or need to be radically restructured'. More radically (although not *too* seriously Peter Watson's 'extinction time-line'⁵ has libraries extinct by 2019—a full 20 years before Google. The question is therefore not whether disruption will occur (it already has occurred and will continue) but whether librarians themselves can disrupt their own 'businesses' now in order to succeed better in the future.

Allocate resources to innovation

Resources for innovation will almost certainly need to be taken from the *core* 'business'. In his book 'The innovators guide to growth', Scott Anthony explains that 'except in rare situations.....companies should set aside at least some portion of their resources for new business initiatives.'⁶ Google employees famously devote a percentage of their time to new ideas. Anthony suggests that an organisation in the 'early stages of its innovation journey' should dedicate a group of people to innovation. This isn't easy for any organisation. I am not yet aware of libraries that have such designated units tasked with developing products and/or services along disruptive innovation lines. Allocating separate 'ring fenced' resources to innovation takes nerve and discipline and, in Anthony's view, it is often better to treat the resource allocation to innovation as a *capital* rather than as an *operating* expense, Ring fencing the resource is important, especially where organisations face trouble in their core business. In this case there will be an almost overwhelming temptation to divert the long term innovation resources to prop up the business in the short term. Libraries facing budget cuts might find it useful to ponder his point as, in the long run, Anthony says, 'such measures can be disastrous'

Look to 'non consumers'

Attention to 'non consumers' seems counter-intuitive at first but the example of the Flip camcorder cited earlier helps to make sense of this concept. In essence the Flip takes away *constraints* on consumption such as price, ease of use and portability. In doing so it has expanded the market by finding what were previously 'non consumers'. *Constraints* on consumption are varied but can be usefully summarised as:

⁴ 'No brief candle: reconceiving research libraries for the 21st century'. (CLIR publication; no. 142). Papers from a meeting convened by CLIR of librarians, publishers, faculty members, and information technology specialists on February 27, 2008 in Washington, D.C. ISBN 978-1-932326-30

⁵ In 'Future files. The 5 trends that will shape the next 50 years.' By Richard Watson. Nicholas Brealey Publishing. 2008. ISBN 978-1857885149

⁶ The innovator's guide to growth. Putting disruptive innovation to work' By Scott D. Anthony [et al]. Harvard Business Press. 2008. ISBN 978-1-59139-846-2

Skills

This is apt in the world of HE libraries where considerable resources are put into developing user skills, for example in information literacy programmes.

Wealth

The inability to afford a product or service is an obvious barrier to consumption. But how could this be a barrier to consumption of what are often considered 'free' library services? The truth is that even where a public library offers free loans there are costs to the consumer in terms of travel and fines (or what might be termed late fees) and time. The web has so lowered the costs of distribution that, in some cases, it maybe cheaper to buy a book (think of it as a permanent loan) from Amazon than to borrow it from a notionally 'free' library.

Access

It may only be possible to consume a particular service in a particular location or at a particular time. A student at home during the holidays may not have easy access to the printed resources stored in the university library. I am unable to use some online business information resources provided by my public library from my home PC because of licensing restrictions. These types of constraints may mean users go to other services to seek more easily accessed and available resources that are 'good enough'.

Time

Time is not absolute. If a product is too time-consuming to use for the task in hand it will not be used. It's worth stating the obvious here too. The judgement about whether a task is too time consuming is made by the library user and not the librarian.

Don't analyse 'needs': instead look at 'what job needs to be done'

'Disruptive' products and services enable people to get an important job done that is impossible to do satisfactorily with current solutions. So a relatively poor teenager, unskilled in the complexities of a sophisticated camcorder finds many obstacles to creating and uploading a simple 30 second video to YouTube. By not taking a 'job-to-be done' approach, conventional market research, on behalf of a mainstream camcorder producer, might not identify such people as customers. Instead they would focus on new features demanded by existing 'high-end' customers. The Flip camera makes the job of creating and uploading videos to YouTube (and consequently sharing them) easy and cheap to do and as a consequence has defined a new group of camcorder consumers. A classic and well known example of 'job-to-be-done' thinking is from Theodore Levitt: 'People don't want a quarter inch drill—they want a quarter inch hole.'⁷

Conclusion

Lewis writes: 'As librarians look at library culture, it is important to understand how different the culture that they need to create is from the culture of the recent past Less than thirty years ago, the most important thing that libraries did was to keep

⁷ Quoted in 'The Innovator's Guide to growth'

millions and millions of pieces of paper in the correct order. Libraries did other things, of course, but if the pieces of paper were not in the correct order nothing else mattered. Libraries' processes and values made it possible for successful libraries to create and manage very large and complex paper files. The processes have changed as libraries were automated, but the values are in many ways still the same. Libraries and their parent institutions, vendors and other stakeholder in the conventional library domain do not have a persuasive track record in delivering 'disruptive' solutions. It's an open question whether the disruption they have witnessed so far is sufficient motivation for them seize an opportunity. The challenge is enormous.