

SCORE Fellowship Final Report By Terese Bird, University of Leicester

SPIDER: Shared Practice with iTunes U Digital Educational Resources

Terese's project ran from 1st November 2010 until the 31st October 2011. The aim of the project was to examine the unique issues surrounding the use of iTunes U as a distribution channel of free learning material. SPIDER (Shared Practice with iTunes U Digital Educational Resources) modelled the organisational, pedagogical, and practical implications of an institution adopting iTunes U, by comparing and contrasting approaches of several UK Higher Education institutions - in particular, project partner institutions the Open University, University of Nottingham, and University of Oxford. The model would be disseminated and best practice identified and shared, by means of this report, the SPIDER website <http://www.le.ac.uk/spider>, and dissemination events including OER11 in Manchester (May, 2011).

SPIDER further examined the impact of iTunes U as a channel of free learning material.

<http://www8.open.ac.uk/score/fellows/terese-bird>

Activities

Website and other web presence: I first set up a website for the project, <http://www.le.ac.uk/spider> so as to have a place to post news, advertise the survey and events, disseminate outputs, and pull together communications. I eventually also created a Scoop.it site, a portal of which displays in the SPIDER website. The Scoop.it site is <http://www.scoop.it/t/itunes-u-as-a-channel-of-open-educational-resources> I considered creating a separate Twitter account or hashtag but decided to just tweet under my own existing username. I also set up a blog <http://spider-project.blogspot.com/> and have it linked to the main SPIDER site, and a presence on our Second Life island describing SPIDER and linked to the website as well. I often advertised SPIDER events and blog posts on the Beyond Distance at University of Leicester Facebook site: <http://www.facebook.com/group.php?gid=352776602274>. Not only did these various web presences serve as dissemination tools, they were also tools of research. I was able to discuss many issues

around my project with people all over the world, via Twitter, my blog, and Scoop.it. My SPIDER blog and Scoop.it were particularly successful, with good discussions generated on the blog post and good dissemination accomplished by the Scoop.it page.

Initial Survey: I set up an online survey at [http://tinyurl.com/surveyiTunes U](http://tinyurl.com/surveyiTunesU) and advertised it using every method in the 'Website and other web presence' section, as well as personally to many educators who could encourage their students to take part. I was able to get participants from every age group, every level of education, and many different countries. The survey asked ten questions related to ownership of handheld devices, how these devices are used, use of iTunes, use of iTunes U, and details about learning from iTunes/iTunes U material. I wanted to have a basic understanding of whether people of certain age groups, or from certain countries, can access iTunes U and do access iTunes U and if so, to what effect. As of today, I have had 153 responses and am in the process of posting the findings on the website: <http://www.le.ac.uk/spider>.

Interview meeting at Nottingham: On 15 November 2010 I visited the University of Nottingham and interviewed Andy Beggan, Steve Stapleton, and Sally Hanford regarding their OER work and experience with iTunes U. The interview was audio-recorded and is one of my major sources. Since that meeting I communicated with Andy and Steve via email.

Interview meeting with Andrew Law: On 16 February 2011 I met with Andrew Law at the Open University, where he explained his role in overseeing the four public outlets of free learning resources flowing from the OU: the BBC, OpenLearn, YouTube, and iTunes U. I did not audio-record this meeting but took notes and followed up with other correspondence to clarify points.

Interview meeting with Melissa Highton and Peter Robinson: On 30 March 2011 I visited the University of Oxford and interviewed Melissa Highton and Peter Robinson regarding their journey from podcasting projects to iTunes U and the Steeple project. I audio-recorded this discussion and it is a major source of my information from Oxford. I followed up with emails and other personal discussions to obtain further information.

Interview meeting with Ben Hawkrigde December 2010, and Catherine Chambers February 2011: Open University technical staff were very helpful and forthcoming with experiences and knowledge regarding the iTunes U launch, aspects of product development, stories of working with staff, future-gazing, and discussion of caveats.

Presentations: I list and detail the presentations in the Dissemination section. My first presentation was to the TIGER OER cascade project partners in November 2011; I will present in December 2011 to the College-Universities Library Network on iTunes U as a source of materials for continuing professional development as well as a library outlet channel.

Internal senior policy meetings at University of Leicester: Beginning in November 2010 and continuing to the present, I have spearheaded the drive to begin an iTunes U channel at Leicester, in the context of learning material for current and prospective students and as a marketing channel, which has been the most effective way of framing the argument thus far. This drive has taken the form of meetings with personnel from Marketing, Distance Learning, Audio-Visual Services, and Information Services, and the pro-vice-chancellor for the Student Experience.

Meetings with academics throughout University of Leicester: Beginning in November 2010 and continuing to the present, I have had probably close to 40 or 50 meetings with various academics at University of Leicester, describing to them the concept of giving away some of their teaching materials and discussing the benefits to themselves, to students, to prospective students, to the university, and to the general public. I did these meetings as part of a request by the marketing department that I conduct an audit of academics' opinions on this issue, and an audit of available and potentially-available material. The majority of these meetings were one-to-one, but some were committee meetings at department and also at college level, and at each one I had a chance to explain ideas of free and open access to learning material, and to discuss the related academic, practical, and marketing-related issues.

Impact Research: In order to get a baseline idea of user access to and familiarity with iTunes U, I set up a survey on SurveyMonkey, asking about ownership of handheld devices and their functionalities, asking about use of iTunes and iTunes U, as well as current level of educational enrolment (if any) as well as country of residence. I advertised the survey on Facebook, Twitter, LinkedIn, and Weibo (Chinese Twitter), as well as by word-of-mouth and connections with colleagues in Afghanistan, China, and other countries. The results of the survey will be posted on <http://www.le.ac.uk/spider> in very early November 2011.

Further research was done by setting up a TwapperKeeper on the keyword iTunes U. This harvested all the tweets on Twitter using the keyword iTunes U; in this way I could see what people were saying on Twitter about iTunes U. This was the best method I could think of to discover aspects of impact of iTunes U. Simple qualitative and quantitative analyses of these tweets, grouping them into themes, types of users, types of usage of resources, and languages used. In addition, data from the official Facebook page of iTunes from different countries was gathered, as well as from Weibo (the Chinese Twitter). Analysis of

Weibo comments was similar to that done with Twitter comments. These data were included in presentations, and will be posted on the website beginning in November 2011.

Other information on impact was gathered by iTunes U universities' download figures supplied by Apple, examining user comments on iTunes U itself, and examining comments on blogs having to do with the use of iTunes U and open educational resources.

Research reading: This was with particular emphasis on the Listening for Impact and Steeple website, Nottingham's U-NOW, JISC's OER impact study, and the various Open University open content studies.

Meetings: Every SCORE meeting presented a good opportunity to network with SCORE fellows and leaders, to ask questions, gain insights, and share information and data. Some results of these were Melissa Highton's seminar at University of Leicester, survey data gathered from Mauritius, and a JISC bid submission together with SCORE fellow partners. Other meetings which I sought out and benefitted from: the Apple Leadership Summit at London in January 2011, OER for use in African Business Schools OLNET Seminar in December 2010, the Winter Mobile Learning Festival at the Open University February 2011, a meeting with Pauline Ngimwa 16 February 2011; and a conference call between Apple representative Lawrence Stephenson, my colleague Ale Armellini, and myself;

Discussions with Apple: In addition to the conference call described above, I spoke by phone numerous times with the Apple facilitator for iTunes U in Europe, Lawrence Stephenson, and also discussed often via email. I twice met with Apple representatives at the Leicester Apple Store to discuss issues such as iTunes store access in various countries and iPad ownership by students.

Melissa Highton speaks at University of Leicester: Melissa Highton, SCORE Fellow from University of Oxford, spoke at a seminar I arranged, at University of Leicester on 9th June 2011, on Oxford's Experience of Podcasts and iTunes U. It was very well attended by University of Leicester staff across the university, and it provided an excellent introduction for many academics to the topics of the release of open learning content, lecture capture, and iTunes U and other channels. Melissa's talk was audio-recorded and the recording distributed to attendees.

Technical work on University of Leicester iTunes U sandbox site: University of Leicester was given an iTunes U site to begin creating an active iTunes U presence. I took over this site at the beginning of my project. I had a little help but mostly had to educate myself how to use it and to add material to the site and to the RSS feed to be picked up by Apple.

Creation of University of Leicester OERs: After meeting with University of Leicester staff and discussing possibilities of making available free learning resources online via iTunes U and other channels, I offered to help them create such suitable files. I audio- and video-recorded lectures, converted already-online learning materials into mp4 and mp3 format, added branding before and after files, and loaded some onto our sandbox iTunes U site. I created about 15 of these resources; my intention was not achieve a large quantity but to test -- I wanted to see how long it would take me to create these, with a plan to create simple guides and workshops so that learning technologists and academics can create their own.

Outputs

Creation of University of Leicester OERs: See previous paragraph for description of process of OER creation. The described guides will be on the SPIDER website from mid-late November 2011.

Reports: Case Study of iTunes U Deployment: University of Nottingham, Case Study of iTunes U Deployment: University of Oxford, and Case Study of iTunes U Deployment: Open University. These will be available on the SPIDER website (<http://www.le.ac.uk/spider>) from November 2011.

Publications: Throughout my project, I wrote a blog published at <http://spider-project.blogspot.com/> and I am attempting to write an article which I hope to be published in a major journal of educational technology research.

Poster: My SPIDER poster was submitted to SCORE in early October 2011.

<http://www.slideshare.net/tbirdcymru/spider-sharing-practice-with-itunes-u-digital-educational-resources>

Data from my Twitter TwapperKeeper can be found on the SPIDER website <http://www.le.ac.uk/spider>
The data from my SurveyMonkey survey will be shown on the SPIDER website from late November 2011.

Presentations are listed in Dissemination section.

Findings

iTunes U is a disputed OER channel. The dispute is about how open it is. One comment received on my online survey sums up the 'open' dispute: "iTunes is a locked system and I will therefore never use it. I don't believe audio lectures which exist in iTunes are OER as the platform itself is a closed system." The "locked" comment refers to the fact that one must use the Apple software iTunes to access the content. A further difficulty is the fact that iTunes does not run on Linux. I would argue that because the iTunes software is free, the system is not locked. Many OERs are supplied in pdf format, for example, and thus require installation of a free pdf reader from Adobe in order to read it, and yet pdf OERs are never considered to be locked. Non-Linux compatibility is unfortunate and nontrivial, but few Linux users have

no access to a Mac or Windows computer. Another reason for the "locked system" comment is the erroneous idea that iTunes content necessitates an Apple handheld device, when in fact iTunes content runs on Windows and Mac computers, and can even be ported from computer to Android handheld devices. Furthermore, any multimedia OER file requires the installation of some kind of software in order to run it. iTunes U is unusual in that its software is both the content shop window and the file player. In the case of audio and audio-video files, it therefore saves the user at least one step; iTunes showcases, downloads, plays, and even nicely stores the file.

Oxford and Nottingham, like many universities using iTunes U, also make at least some of their iTunes U-published content available via RSS feeds on their websites. This is so that users do not have to use any Apple software to access the content, if they do not wish to. Oxford reports that their iTunes U site gets ten times as many hits as their RSS-enabled websites (Highton, 2011a).

Besides these technical concerns, there are economic and political reasons why iTunes U material may be perceived as not open. Some of these are derived from the same erroneous idea that iTunes U necessitates an Apple handheld device, one that is just not affordable for most of the world's learners. But since iTunes U only requires the free iTunes software and a computer with an internet connection, it makes the same technical demands as any undisputed OER channel (except for Linux compatibility). My survey indicates that 67% of respondents (from all over the world, including Afghanistan, Mexico, and Mauritius) identify themselves as users of iTunes. There is the further argument that because iTunes U was created by a major corporation, with the intent of showcasing good learning material on its hardware and software, its corporate interest negates any claim to openness. I would argue that iTunes U's corporate nature rather implies a greater sustainability than can be expected from other OER channels, and that that the partnership between the university and Apple can work to the university's advantage. **SCORE should continue to expect good technical understanding to inform questions of access and openness, and should not succumb to the idea that "if it isn't served out by a browser alone, it can't be OER" nor to the idea that cooperation with a corporation necessarily negates openness.**

iTunes U can be considered the most mobile-ready of any OER channel. Because it is made to run nicely on Apple handheld devices, the learning content is very attractive and convenient on these devices. All three of the universities I interviewed reported growing numbers of downloads of iTunes U content to mobile devices. The introduction of the iPad in 2010 can be seen clearly in download figures, with the Open University reporting that, of unique IP hits (hits on the site by unique internet-enabled devices) in July 2011, almost three-quarters were by mobile devices (Brockis, 2011). The fact that this content works best on Apple handhelds is balanced by the fact that there is still no like-for-like competitor to iTunes U.

At least one OER channel is actively courting handheld devices. **SCORE should look for further development of mobile-ready OER, especially keeping an eye on the new Google competitor to iTunes, Google Music, as well as Amazon MP3, to watch if these will begin to feature educational podcasts in addition to music .**

Impact

1) Downloads:

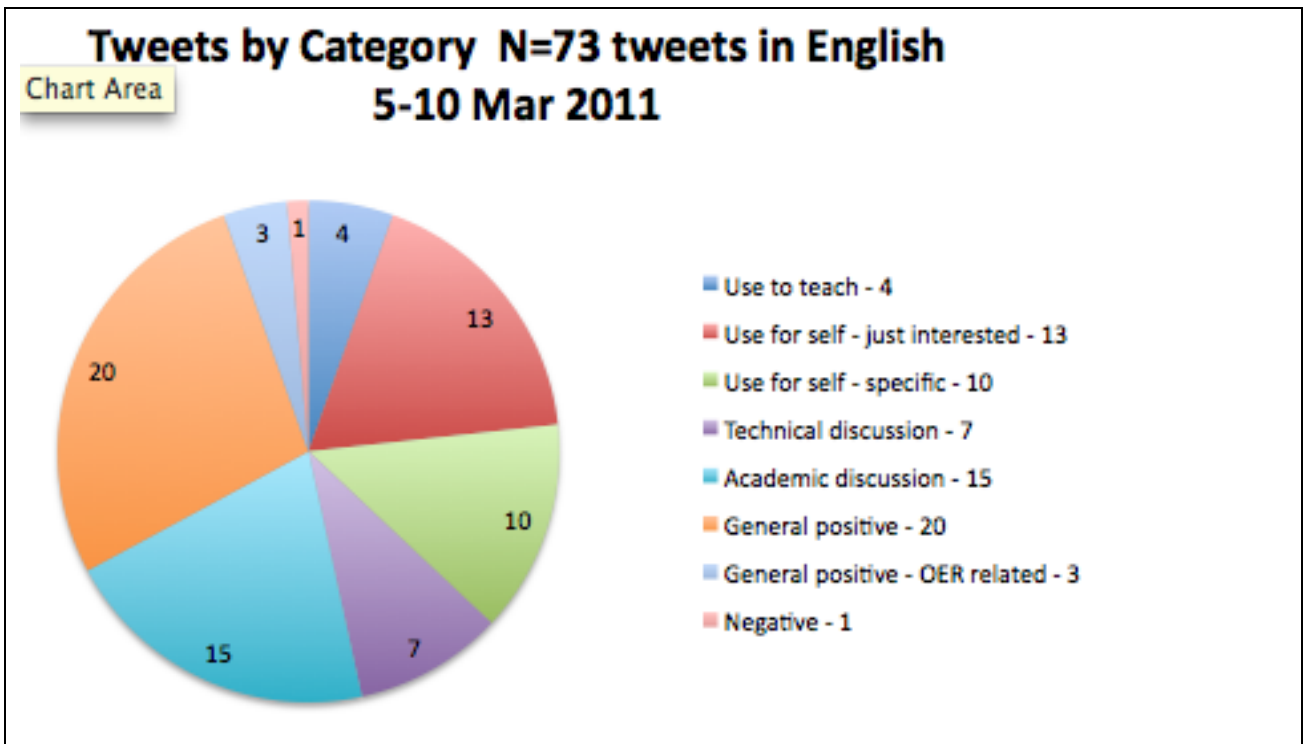
iTunes U results in massive numbers of downloads of learning content. As of late October 2011:

University	Downloads
Open University, UK	Over 40 million since June 2008
University of Oxford	Over 10 million since June 2008
Coventry University	2.5 million in 2010 alone
University of Warwick	1 million Jan '09 – June '10
<u>Cranfield</u> University	5000 in 1 st 10 days

These downloads are done by people around the world (this fact can be seen in consumption by country statistics provided by Apple) (OpenUnivrsiy, 2011). All interviewed universities report that the largest number of downloads to a single country is to the United States. Oxford reports that its second highest country, accounting for approximately one-third of its downloads, is China (Geng, Marshall, & Wilson, 2011). The Open University reports that even more downloads than to the United States are done by people in 'the rest of the world, ' indicating a group of countries with too few downloads to feature on their own -- and excluding Western Europe, USA, Australia, Japan, China, and Canada (which do feature on their own). It can therefore be inferred that a proportion, possibly a substantial proportion, of Open University iTunes U content is being consumed by the developing world. iTunes U has a unique 'reach power' throughout the world and is not blocked by countries as is YouTube (which is blocked in many developing countries and China). iTunes U resources can be either streamed or downloaded to a device and consumed when offline, which makes them more accessible to users with intermittent and otherwise poor internet connections. **SCORE should note and capitalise on iTunes U's powerful and international reach with particular potential in the developing world.**

2) Use: I did several captures of Tweets to discover what people are saying about iTunes U materials and how they use them. This was the best way I could think of to gauge use. Since there is so much data, I will summarise by focusing on the capture of tweets between 5th and 10th March 2011. There were 101

tweets that included the keyword iTunes U between those dates, with 73 of these in English. I categorised these 73 as follows:



The above numbers refer to the number of tweets in each category. Each time I did a Twitter capture, I found that the distribution of comments was much the same, and my online survey yielded similar remarks. Of those who tweet about their iTunes U use, most are using iTunes U materials for personal study, and of these, more than half are just looking for something interesting to learn about. One could use the term 'edutainment' for this use. The others seem to be looking for particular help in a subject, -- for example, this tweet from a staff member at a university which does not yet have an iTunes U presence: "I know our students listen to iTunes U podcasts from other med schools." In other cases, the tweeter's university is using iTunes U for material dissemination and students are engaging with that material for a class they are enrolled in.

From the amount of academic discussion taking place on Twitter about iTunes U material, we can see that iTunes U consumers are engaged with the learning material. Finally, each time I did a Twitter capture, I saw a very large number of tweets stating how enjoyable is iTunes U. Often these tweets imply recent discovery of iTunes U for the first time, and some imply that they believe not many people know about it. I noticed words such as 'addicted' and 'love'; for example: "Hello **iTunes U**. Where have you been all my life? No more watching random MIT lect on YouTube for me! If only my Mac made a heart symbol...."

The University of Oxford studied the impact of their podcasts, the largest number of which have been accessed through iTunes U. They found that, for example, of 700 incoming first-years surveyed during

Freshers' Week, about 400 of them had previously listened to Oxford podcasts (Highton, 2011b). Most of the impact studies were done by examining emails received from consumers of podcasts: personal use of these podcasts fell into categories such as "aspirational" (listeners with an interest in enrolling at Oxford), and "inspirational" (listeners were inspired to learn more).

3) Reuse: In my Twitter analysis, I only categorised a tweet as regarding use in teaching if the tweeter specifically mentioned this. In my capture from 5-10th March, for example, 6% specifically mentioned reuse in teaching. An example: "We're looking @ iTunes U & podcasts in the [#csci101](#) class today. Here's a good one. TED - TEDTalks (video) - <http://itun.es/i6X5Jh> #iTunes" This tweet indicates unadapted use of the resource in the classroom. Another example of the same type of reuse is this exchange between teachers: "iTunes U? Pick a lecture that matches up with my class content & have students take notes during lecture." and the reply "iTunes U YES! Excellent Idea! Thanks – I always forget about that nifty tool." Oxford's impact assessment also found evidence of unadapted reuse by teachers. Additionally, emails to Oxford podcast creators revealed other teachers' use of ideas taught in Oxford podcasts without them using the actual podcast live in class, as well as teachers' use of simply learning more from the podcasts as general professional development.

The JISC OER impact Study Research Report indicates that educators value multimedia OER because they are ready-made and encourage richer learning, especially with certain subjects such as engineering and the various sciences that require visual demonstration. The study also found this type of OER is most often used in small pieces, or high granularity, with the teacher providing context, interpretation and application -- the "pedagogic glue." (Masterman, Wild, & White, 2011)

I have not seen much evidence of iTunes U material being adapted before reuse. One issue here is that not much of the material on iTunes U is properly licensed for adaptation. Also, while it is not impossible to adapt multimedia files, it is not as straightforward as doing so with text. Finally, iTunes U material is mostly used by independent learners who have no need of re-adaptation and who do not worry about licences. **SCORE should note the unique learner satisfaction associated with iTunes U materials. In my opinion there is an attractiveness both in the materials and in their presentation and usability which results in this high satisfaction. iTunes U materials may not be considered to be fully open because not very many are creative-commons licensed, yet this is not much of a problem since most use of iTunes U material is by individuals for their own consumption, and use in teaching is in context and by links. iTunes U is a high-achieving free learning channel due to its discoverability, attractiveness, and beyond-text value. The fact that multimedia OER cannot be very easily modified for repurposing should not detract from its value for use and reuse as-is.**

Institutional participation in iTunes U: It is more difficult to begin an iTunes U site than it is to begin, for example, a YouTube channel. An iTunes U site can only be started by an entire institution -- an entire university or museum, for example, and then only after being granted access by Apple. Apple will do so only after being convinced that there is in place a team whose members will continue to produce good material. The team should consist of marketing, IT, academics, and at least one high-level manager, and Apple suggests including the student voice as well. Apple charges nothing in the iTunes U agreement. At least in Europe, universities must host content on their own servers. RSS are set up to allow the content to flow out through iTunes U to users around the world. Some graphic arts expertise is helpful to design the front page of the iTunes U site, and then to present the small squares of artwork or album covers signifying each podcast series. Each institution must launch with at least 150 unique files, and it is wise to have at least 100 or so files in reserve, so as to be able to release these in the weeks following launch and allowing time to catch up production of new material. After site launch, Apple sends each institution a weekly spreadsheet indicating numbers of downloads and from which countries and to which operating systems. Institutions which already have systems of production of multimedia files are therefore particularly well-placed for iTunes U – institutions which have lecture capture systems or multimedia-based teaching and learning materials already being produced will have less to do than institutions which do not have these. However, iTunes U is so attractive for marketing purposes – it is excellent for showcasing a university's brand and it brings visitors to the university website – that it tends to galvanise institutional forces and encourage cooperation and communication where perhaps these were not previously needed. Every university I interviewed reported this. The real benefit here is that OER can be discussed in a forum where it may not have had an audience previously.

iTunes U comparison with YouTube.edu: Universities with both YouTube.edu and iTunes U channels generally report more unique visits with iTunes U than with YouTube.edu or YouTube. The Open University, for example, reports three times as many unique visits with iTunes U as with YouTube, although Andrew Law predicts this gap will narrow as more content is added onto their YouTube channels (Law, 2011). University of Nottingham also reports more unique visits with iTunes U. iTunes U attracts many more hits by mobile devices than does YouTube. The OU for example reported 13% increase in iTunes U visits by mobile devices from July 2010 to July 2011, whereas in the same period, its YouTube channel experienced only a 1% increase in hits by mobile devices. YouTube is a simpler platform to get involved in, and can be considered more accessible to users. It imposes a time limit on videos (10 or 15 minutes), whereas with iTunes U there is no time limit. Many universities run both channels almost in parallel. They tend to put the better learning material onto iTunes U, while the more marketing-focused material goes more readily onto YouTube. Because of this, and because institutions want to show

themselves really well on iTunes U, it tends to have consistently better learning material than YouTube. Apple has thus far shown more commitment to iTunes than Google has shown to YouTube. Finally, YouTube, even YouTube.edu, is blocked in China, Turkey, and quite a number of countries of the Middle East. iTunes U is not blocked anywhere, presumably because it is considered to consist only of good learning material. As of 15 September, 2011, there are 100 participants in YouTube.edu (Rai, 2011). There are over 800 universities on iTunes U, plus additional educational institutions such as museums and associations, as well as primary schools. Schools and colleges in the UK and USA tend to block YouTube due to the amount of irrelevant and inappropriate content, whereas iTunes U material is seen as necessarily educational (Holland, 2011). **SCORE should note that iTunes U and YouTube are both important corporate channels of free educational material, each with different positive and negative points, and each having strong, viable futures.**

Reflection

As a learning technologist, I began my fellowship study by looking at technical issues in defining openness and usefulness, and then moved on to the impact of iTunes U resources in UK higher education contexts. Through an OLN seminar I attended with colleagues from Ghana, as well as meeting SCORE fellows and OU associates from other countries, I had opportunities to consider the same issues framed in different countries' contexts and was therefore faced with questions of affordability, infrastructure, and cultural barriers or demands. Through considering these issues, I could begin to broaden my understanding of the significance and possible benefits of OER. I could see that OER acceptance and good practice could not only save time and resources but could help share out learning into situations and communities where it was most needed. I could then reflect this idea back to the UK, where we have our own economic and educational constraints, and I could see possibilities that OER might share out learning to UK communities in most need. I still think that OER makes sense in a discussion of efficiency and economies of scale, that use of OER can save precious resources in a time of 'austerity.' These reflections gave me more enthusiasm for iTunes U, corporate as it is, because of sheer pragmatism. If a successful international corporation can join forces with learning institutions to share out free learning material, then how can it be a bad thing? It's almost like a funds-matching scheme for OER. This is true also, albeit to a lesser extent, with YouTube.edu.

This fellowship boosted my confidence in carrying out academic research and analysis and encourages me to continue. I have been forced to remember and practise my Level 4 Research Methods, and that has been surprisingly enjoyable. I have found it very difficult to juggle my University of Leicester work against SCORE work. My University of Leicester work is mainly in a support role, which means I have a reduced claim to my time being my own. At the same time, my role as a supporting learning technologist, with

some connection and input into managerial decisions in both my current and previous roles, gave me a unique vantage point to consider OER issues.

At my university, many changes have happened in my own group during the time of my fellowship. My previous boss's departure stalled our own iTunes U progress but opened a new opportunity for it. It has largely fallen to me to keep the talks going, to pound the pavement speaking to various academics about the benefits of sharing their good learning resources, and to help policymakers see the benefits of sharing as well. The fact that I have been a SCORE fellow studying the implementation of iTunes U gave my arguments credibility with academics, and was an excellent opportunity for me to make SCORE OER concepts useful to academics at the coalface of teaching. My SCORE study also gave me credibility at the level of managerial discussions at the university, and though we haven't yet made the decision to jump into iTunes U, my discussions with Leicester academics as part of SCORE work, and my knowledge of the other universities' experiences, has pulled its own weight and is already resulting in more Leicester academics considering and practising sharing learning material openly. With changes being made at our university and the arrival of my new director, I have every hope that our university can plug the gaps that have hindered faster movement down the path of sharing both within and beyond our institution.

Being a SCORE fellow and studying this topic has opened doors for dissemination and cooperation. I have now been twice invited to speak at the College-University of Leicester Network (CULN) conferences, on open and free eBooks (including how to make your own), and iTunes U library collections. This has given me a chance to try to apply the OER concepts we cover in SCORE, and make them useful to librarians and college academics and administrators. I have also been invited twice to speak at eLC Events at the Open University on topics stemming from my SCORE work.

Finally, one interesting outcome of my SCORE study is the need for simple helpsheets. Making good OER has been found again and again to be very time and resource-consuming, although I believe it doesn't have to be. Digital media tools are widely and cheaply available now, and can be employed to create and adjust learning materials suitable for sharing. At the end of my SCORE study, I would like to state my intention to create and share such worksheets from my SPIDER website and OER repositories, after of course looking for good existing OER on this topic. After all, one of the most important things I have learned during SCORE is that OER enthusiasts should practice what they preach, and should use as well as create and share OER.

Dissemination

Throughout my project, I updated the project website <http://www.le.ac.uk/spider>, I wrote a blog: <http://spider-project.blogspot.com/> and I curated a Scoop.it site: <http://www.scoop.it/t/itunes-u-as-a-channel-of-open-educational-resources>

On 26 October, 2011, I presented **YouTube and iTunes U for Beyond-text OER** at the **Openness and learning design in Higher Education Online Seminar**.

<http://www.slideshare.net/tbirdcymru/youtube-and-itunes-u-for-beyondtext-open-educational-resources>

On 8 September, 2011, at the ALT-C Conference in Leeds, UK, I delivered a short paper entitled: **iTunes U: Corporate Channel of Free Educational Resources**.

<http://www.slideshare.net/tbirdcymru/itunes-u-corporate-channel-of-free-educational-resources>

On 16 June, 2011, I presented **How younger students use social media for non-leisure purposes** at an eLC Event at Open University, Milton Keynes, UK.

<http://www.slideshare.net/tbirdcymru/how-younger-students-use-social-media-for-nonleisure-purposes>

SPIDER was represented at **OER11** which took place 11-13 May, 2011 at Manchester, UK. I presented "**Is iTunes U a successful model of Open Educational Resource distribution?**".

<http://www.slideshare.net/tbirdcymru/i-tunesu-successfuloer11>

I led a workshop entitled **Embracing Multimedia: E-books, E-Readers, and iTunes U for Librarians and Educators** at the Colleges-University of Leicester Network Research Conference, 10 May 2011, in Oadby, Leicestershire.

<http://www.slideshare.net/tbirdcymru/ebooks-ereaders-and-itunes-u-for-librarians-and-educators>

I delivered a presentation entitled **The Impact on Learning of iTunes U Open Educational Resources** at the Follow the Sun Learning Futures Festival Online 2011 on 14 April, 2011.

<http://www.slideshare.net/tbirdcymru/impact-on-learning-of-itunes-u-oer-follow-the-sun-14-april-2011>

I delivered a presentation entitled **'The Impact on Learning of iTunes U Open Educational Resources'** on 23 March, 2011, at the Open University **Languages Open Resources Online** event entitled "Does it make a difference?: Researching and evaluating the impact of repositories and OERs on teaching and learning" at the Open University.

<http://www.slideshare.net/tbirdcymru/the-impact-on-learning-of-itunes-u-open-educational-resources>

I presented **iTunes U: An Introduction** at a **TIGER OER project** meeting, 8th March 2011 at University of Leicester. <http://www.slideshare.net/tbirdcymru/i-tunesu-freeeduresources>

Future work: I have been invited to speak about library collections on iTunes U at the Colleges-University of Leicester Network meeting on 2nd December 2011, and at an Open University eLC Event being organised by Chris Pegler on 7th December 2011. I am working on putting in a joint paper with Melissa Highton of University of Oxford for Cambridge 2012. Finally, I am working on an article which I would like to submit for publication in Research in Learning Technology.

Conclusions

Some OER scholars believe that having a community associated with OER collections is almost a requirement for it to be valid OER; others believe a community is either not important or near impossible to ensure. iTunes U has no community in its environment, although it has a very under-utilised facility to rate and make comments. I found, through searching through social media, that people are discussing the material but in different environments from where the OER is posted. I think my use of social media to gather evidence was pretty innovative. It is notoriously difficult to gather evidence on use of open educational resources, and fortunately iTunes U is just such a channel that people discuss on social media. The best way to gather evidence using Twitter is to set up a TwapperKeeper, which collects all tweets which include a particular keyword or hashtag term, into a single archive which can be searched anytime. Tweets can then be analyzed for language, terms, and content, both qualitatively and quantitatively. In January 2012, TwapperKeeper was taken over by HootSuite, and archives were not freely brought across, so I did my best to preserve and present what TwapperKeeper captured, on the SPIDER website.

I feel it was pretty innovative to search the Chinese Twitter, Weibo, for evidence as well. This was part of my comparison between iTunes U and YouTube. On Weibo, I asked about YouTube.edu, and the reply came that it could not be accessed. I then did my usual search on the term iTunes U on Weibo, and harvested a number of comments indicating that iTunes U materials were very valuable, especially but not only for learning English, and especially as compared with Chinese universities who do not openly publish learning materials (except for the Beijing Open University which is on iTunes U). I conclude that for anyone interested in reaching the Chinese student 'market,' iTunes U is key.

Another innovation was to create a Scoop.it site for my SCORE topic. Scoop.it searches a huge number of internet channels for keywords, and also allows any other link or blog post to be displayed on its site. All

of these are automatically tweeted. Using all of the above methods, as well as my blog, I was able to disseminate about SPIDER daily as well as keep up constant discussion with interested parties.

Looking at the Apple download figures as a form of learner analytics is very useful, especially since these figures (similar to Google analytics) identify the operating system of the accessing device. It is key to note the explosive growth of the iPad, which has no real rival even on the horizon. Apple is aggressively targeting US schools in particular for 'one-ipad-per-child' type discount programmes (there are many in the UK as well), and has also launched a primary school section on iTunes U. Therefore, perhaps uniquely among learning material channels, iTunes U can be seen to have a very solid future.

I have come to the conclusion that successful OER implementation cannot happen without compromise. Did iTunes U begin as a pure OER endeavour? Certainly not; it began when Steve Jobs invited US HE educators to look at an iPod and think of ways it could be used in learning (Chronicle of Higher Education, 2011). Six years later, iTunes U has expanded worldwide, beyond universities, distributes well-loved content and does not need to ask for donations to keep going. Do universities partner with Apple on iTunes U because they wish to educate the world? Perhaps to some extent, but their main objective is to benefit their public profile. Mixed into that may be a desire to do a public service to share knowledge. Individual instructors are often very philanthropic in their decisions to share but certainly motives are mixed: to quote a Nottingham instructor who distributes all of his lectures over iTunes U and YouTube, "...when it comes to making the videos available to a wider audience, perhaps the single biggest thing is that I like explaining stuff, and it feels good to think that people around the globe may find my explanations helpful.... Mixed in with this is the fact that I am representing the University of Nottingham, and promoting both my own teaching and the University of Nottingham's resources worldwide... Finally, I have had correspondence with OER Africa. It is very useful for them (and presumably other similar organizations) to have access to complete modules from reputable institutions worldwide in order to support teaching at universities which have more limited resources. So you could say it is a mixture of things ranging from altruism through professional pride to vanity!" iTunes U is a channel which seems to bring prestige to one's profile and has power to attract participants to the OER cause. OER educators should not be so purist as to disregard the usefulness of pragmatism to launch OER endeavours. At the same time, however, universities should not succumb to the temptation to put too much material onto iTunes U and other channels, which is about marketing more than learning. This diminishes channel value and is self-defeating. To quote Open University Vice-Chancellor Martin Bean, "It's the great learning content that brings registrations" (Bean, 2011).

Summary

iTunes U is the subset of Apple's online store, from which educational materials in audio, video, and text formats can be downloaded free to Windows and Mac computers and to Apple handheld devices. It began as a cooperative effort between Apple and several American universities to distribute learning material such as recorded lectures to current students and alumni, and was quickly expanded for public distribution. Over 800 universities worldwide have sites, as do schools, libraries, museums, and other educational institutions such as CERN and UNESCO.

iTunes U is disputed as a channel of open educational resources (OER) mainly because only a small percentage of the material is licensed for repurposing; I only found six universities posting Creative-Commons-licensed material. However, both the Hewlett Foundation and OER Commons define OER without requirement of open licensing, only that material be in the public domain (Hewlett, 2011) (Delich, 2007). Social media feedback indicates that the vast majority of use of iTunes U material is as-is, and so a license to repurpose is unnecessary. iTunes U material, being mostly audio and video ('beyond-text'), can be complicated to alter. The JISC OER Impact report indicates that educators value beyond-text OER for its rich communication of ideas, and the fact they do not have to take the time to create something beyond-text. (Masterman et al., 2011) I argue that iTunes U is 'open enough,' satisfying the requirements of the vast majority of its users.

iTunes U is considered by some to be part of a 'locked Apple ecosystem,' which in fact consists of free iTunes Mac- and Windows-compatible software. Except for the exclusion of Linux, I argue iTunes U is as open as browser-based OER channels. iTunes U materials load easily onto Apple handheld devices but not so easily onto others. This is a mark against its openness, especially since Android has pulled ahead in phone ownership (although Apple dominates the tablet market). However it is the only OER channel designed for mobile. I believe this is an important reason users use terms as 'love' and 'addicted' (Bird, 2011): because these materials play attractively on their personal devices, users respond positively.

Tweet analysis indicates iTunes U material is mostly used for individual learning, roughly equally divided between seeking a specific topic, and just learning out of interest. Others, about one-fifth the number of individual learners, describe using it in teaching. Some school authorities in the US and UK use iTunes U for curriculum-approved teaching materials. It is notable that YouTube is often blocked in schools, while iTunes U, seen as approved educational material, is not blocked. Discussion on Weibo shows iTunes U is appreciated in China, where YouTube is blocked and there are almost no freely-available learning resources from Chinese institutions. YouTube.edu is a growing channel and a strong challenger to iTunes U.

Universities join iTunes U mainly for the double purpose of distributing learning materials as a form of profiling. Universities can often see the value of iTunes U though not of other OER endeavours, and thus may post material that is more marketing than learning, threatening the learning value of the channel.

Finally I argue that although partnering with a large corporation has its negatives, iTunes U, having emerged naturally from cooperation between a corporation and universities rather than through an injection of project money, demonstrates a resilience and sustainability unique among OER channels.

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