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Three big hairy audacious goals for an open USQ

I recently accepted an invitation to write a paper for Serials Review for a special edition on how repositories have influenced publishing[1]. While the Open Access movement has obviously had a profound effect I looked instead at an area where some, but not all publishers are ahead of the Institutional Repository movement; in getting journal articles onto the web in HTML, with embedded machine readable semantics and linked data rather than just PDF. As part of that paper I hinted at a model designed to change scholarly publishing, nudging it towards the web by working outside of areas that are controlled by existing publishers and publication models. In the paper this is presented as a two pronged approach:

1. Promoting web based thesis dissemination.
2. Building new journals of pedagocial practice that recognize the research that goes into creating courseware and running online learning.

But really, there are three things. I'll explain the other one below.

It just so happens that our new boss, Deputy Vice Chancellor Philip Candy is meeting with staff over the next couple of weeks, and he's asking us for **three ideas for the future** where we would value his assistance/input. Philip wants a one-page document so I thought I'd cheat and use the blog to expand on my three ideas. Here are three substantial goals to which I think USQ should aspire before someone else aspires to them and steals the thunder. I think these would take us well on the way to being a truly open university:

1. Be the **first university in Australia** to mandate that theses are deposited in the institutional repository in **HTML**, with linked data and embedded semantics as well as the standard paper-on-screen PDF file.
2. **Revitalise USQ's commitment to Open Courseware** and start working towards a mandate for having all courses open within three years, staking our claim in all the areas where we have leading distance programs.
3. Create a new journal or set of **journals of pedagogical practice** which are geared to show how distance courseware is the product of research processes, giving a way for the research that is implicit in flexible delivery to be made explicit and valued along with other research. (An idea I got from Peter Albion at USQ)

Why?

I'll start with the theses. The Open Access movement is now well established, and USQ already has a mandate (1) that all theses are to be submitted electronically and to go into ePrints when the degree is conferred. This does help to make research available to the community that paid for it, but it is such a pity that in the web age we are still stuck with the paper view of a research output. Citations are not reliably machine readable, data sets are rarely made available and if they are they are not linked into the thesis. And worst of all, the thesis is not made available in HTML where it is part of the fabric of the web. Can you imagine a university getting away with a web site which was PDF only? We certainly try not to deliver courses that way[2]. In most web situations PDF is considered an accessibility barrier and yet in the repository community it's the main game.

There are some universities around the world with XML production systems for theses, where HTML should be available but as far as I know none of them have achieved the level of automation that we have or spent as much effort on the semantic web in way that will be usable by candidates. This is partly because most of the efforts have used complex XML schemas which are not a good match for word processing documents, whereas we target HTML which is a reasonably good match for a generic styled word processing document.

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So why are institutions in general not mandating that these must be available as web pages?

Well, in most places that would be because it is too hard to do. Regrettably you can't just save as HTML from Word and expect to get repository-quality web pages, or expect any-old LaTeX file to be magically web-ready. You can read me ranting on about that in this list of delicious links about how hard it is to make HTML from word processors. But at USQ, we have a not-so-secret weapon: ICE. The Integrated Content Environment is the core university system we use here to create our long-form courseware a lot of which is very similar in size and structure to a thesis. With Jim Downing and team at Cambridge, we have shown on the ICE-Theorem (2) project how chemical theses can be created in ICE and published to the web complete with embedded chemical semantics and everyone's favourite the rotating molecule (they're taking this much further with Chem4Word which we will try to work with as well). Jim and I will be presenting that work at Open Repositories 2009. And we have a few other sample theses that show that we can produce rich web-based theses and still have the core part delivered as a printable PDF file.

We have the systems. We know it can be done. It's a small institution. Let's do it.

Getting spectacularly data-rich highly-linked theses online is one way to change the expectation of up and coming academics. They will be able to continue to use ICE to create their papers and where publishers allow it, will be able to deposit these as well into repositories, given the right adapters. But as I noted in my paper for eResearch Australasia last year (3), the big problem is that publishers are not set up to accept rich documents, so there is little reason for people to care. I still like the example of Peter Murray-Rust writing a paper using a web editing package, all about semantically rich publishing. Then having to put it into Microsoft Word to submit it to the journal (4).

My proposed solution to that? Make new publishers who do accept semantically rich HTML. And I know just the area we need them. Years ago Peter Albion here at USQ noted that it would great if courses, or parts thereof, could be valued as peer reviewed literature. On an ad-hoc basis that could happen. You could submit a literature review to a journal and use the same thing as part of the course, if you could navigate the copyright. But what if there were a place you could submit an existing bit of course with a brief paper describing how it represents the outcome of novel research. It could have been reworked due to student feedback, or stand alone as a literature review. An awful lot of what our course writers do is based on research into teaching and learning – it's just that nobody has the time to write it up as such.

The easiest way to make this all happen would be to base it on open courseware. The submitted papers would be required to point to openly available materials, under an appropriate license, and the published work would end up being an aggregation of the paper and the course materials. I am imagining a pipeline model with no issues, with articles sent for peer review as they come in, and published using on online open access repository as soon as they are approved. (If this kind of thing exists then please let me know in the comments, I've had a look and an ask around and I could not find reference to this kind of model).

The journal would provide a DOI to access the aggregate work, so it could be cited (or included with attribution) in other courses and/or research. This would provide a way for open courseware to be valued using the systems of metrics and government reporting we already have, and potentially kick-start the revolution that I'm sure is coming in open distance education where we can remove some of the redundancy that's built into the system, where we all write and jealously guard our own materials and yet don't get recognized for them.

Which brings us to open courseware. When USQ was looking at joining the Open Courseware consortium (OCW) Cameron Loudon and I did lots of work on the benefits, looking at it from institutional, departmental, teacher, student and outsider views. You can see the initial approach taken by USQ in Jim Taylor's paper, *Open Courseware Futures: Creating a Parallel Universe (5)* which focused on open academic support (largely via volunteers) and assessment on demand services.

The OCWC site includes this:

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> An OpenCourseWare is a free and open digital publication of high quality university-level teaching materials – including syllabi, lecture notes, assignments, and exams – organized as courses. OpenCourseWare (OCW) initiatives typically do not provide a degree, credit or certification, or access to instructors. The materials are made available under open licenses, for use and adaptation by educators and learners around the world.

And this:

> An OCW project differs from other Web-based education offerings in that it is free and open, and because it takes an institutional approach to online course publication. OCW is not a distance-learning initiative. Distance learning involves the active exchange of information between faculty and students, with the goal of obtaining some form of a credential.

They are at pains to point out that OCW is not the same as distance education, but plenty of people have noticed the contrast between classroom materials published on the web, and real distance materials, such as we have at USQ. Which would you rather use if you were a self-directed learner? PowerPoint slides minus the MIT professor, or a couple of hundred pages of exposition with input from an instructional designer? (OK, so maybe you'd still want to watch the MIT lectures.)

I think it's worth revisiting OCW at USQ. I will go through what I see as the benefits for the major stakeholders. Lets start with the most distant stakeholder, the generic **outsider**. There are three main beneficiaries of USQ's open courseware.

1. **Society at large.** Just as with open access to research data and publications, we're talking about publicly funded institutions like USQ creating course materials, why should they be toll-access?

   Imagine if teaching materials were like research publications, where instead of doing the same work over again you were able build on prior work. Someone has already done something similar? Then use it and improve on it and publish the reasons your changes are improvements. There is a lot more sharing going on in the schools and vocational sector.

2. **Learners who find and use materials.** Thinking of studying with USQ? Have a look at the course materials first (if we put up a decent amount that is). Some learners might be happy to just read along and maybe do the activities. In Jim Taylor's model an army of volunteers would assist them, but whether or not that comes to pass, I can see quite a few learners who arrive via Google exploring our materials.

3. **Academics who want to use the materials**. This group would get the benefit of using or adapting pre-made stuff. Given our small start in the game I don't think we've seen much reuse of the open materials we put up, but my colleague Shirley Reushle reports that she often sees unauthorized reuse of her materials which are copyright USQ and very clearly not published under an open license. It would be better for Shirley if the reuse was official, and even better if we could make that count as a citation.

For **USQ's students** one of the main benefits would be that they would be licensed to keep materials and legally share them with colleagues or rework them for new situations.

For **our own staff**:

1. You get to **keep access to your work** when you move on rather than having to redo it.
2. You can share your work with colleagues and **potential new employers**.
3. If we set up the journal infrastructure I talked about above, you can **get recognition** for work in a way that has not been possible before.
4. You may get feedback from outsiders, including, potentially **improvements** that you can use in your own practice.

For the **institution, the biggest benefit** I can see would be all the **search engine traffic** if we put all our engaging materials online. I know from working with USQ courses that lots of the material is

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really interesting. Some of the visitors will want to stay and study, so we would have to provide a pathway from the open courseware 'in the raw' to studying at USQ. Jim Taylor looks at stuff like assessment on demand in his paper. There's also the fact that for enrolled students we have collected readings and some other licensed materials that we can't put on the web so, signing up will get them access to those. We would have to be aware of the requirements of the OCW consortium, which I'm pretty sure is not intended to let institutions set up shop-fronts with an open courseware window.

Beyond the bums-on-seats approach there is also the fact that this is The Right Thing To Do. Public University funding resulting in publicly available materials. Access for everyone with a net connection.

Some people want to talk about risks, I'm sure. We heard quite a few of these at USQ when the OCW was first mooted. The two big ones I remember hearing were:

We might be exposing poor quality courseware

> If we did happen to have the odd bit of poor quality courseware then I think the bigger risk would be continuing to deliver it to the students and hiding the fact that we're doing so. If we have stuff that needs attention then our internal quality systems should be catching it long before it hits the web, just the fact that it's going to be open might make authors try a little harder. Then when we do have stuff on the web then we can provide ways for people to give feedback, corrections and suggestions.

We would be giving away our courseware to <insert competitor here>

> Well yes we would[3], but remember that every time they use it they will be advertising USQ's leadership because of the attribution clause in the Creative Commons license. Teaching someone else's course might seem a bit strange at first, but In my opinion this is one of those things that will happen, like the gradual change from per-call charging for phone calls to data-based charging, nobody wants to be first and cannibalize their own market, but it would be disastrous to move last. The sooner more of the quality distance universities gets a stake In the ground like the Open University in the UK with their OpenLearn, the greater their ongoing share of the copyright in materials once they start to be used elsewhere. Don't forget that Open Source and OCW are based on copyright and whoever holds the copyright in the first version gets the attribution.
>
> Back to the FAQ at OCW:
>
> > Through OCW, the publisher grants the right to anyone to use the materials, either "as is," or in a modified form. There is no restriction on how a user can modify the materials for the user's purpose. Materials may be edited, translated, combined with someone else's materials, reformatted, or changed in any other way. However, most OCW projects share three requirements that an OCW user must meet to use the materials:
> >
> > - **Non-commercial**: Use of OCW materials is open to all except for profit-making entities who charge a fee for access to educational materials.
> > - **Attribution**: Any and all use or reuse of the material, including use of derivative works (new materials that incorporate or draw on the original materials), must be attributed to the publishing institution and, if a faculty member's name is associated with the material, to that person as well.
> > - **Share alike (aka "copy left")**: Any publication or distribution of original or derivative works, including production of electronic or printed class materials or placement of materials on a Web site, must offer the works freely and openly to others under the same terms that the OCW-publishing institution first made the works available to the user.
>
> Anyway, universities are really differentiated by a lot of other factors – including, one would think, the teaching staff and their methods and the colour of their website.

None of this is up to me of course, I'm just attempting to rekindle a conversation about open courseware, in the hope that we can do something big and significant based our corpus of world leading distance materials while the field is still relatively clear.

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The thesis idea – to make it compulsory for all USQ theses and dissertations to be put on the web as fair dinkum web pages is actually very doable – after all we have made that commitment with our learning materials. The other stuff, like setting up journals is a tiny bit more challenging but we have already taken the first steps.

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1 The online submission process was a real ordeal – I had to split my document into two parts and upload them, order them and wait while it built them into a PDF file. At one stage I had about five uploads all appended into one thing. Took six tries to get it right.

2 In the past we had trouble putting maths-heavy courses through ICE, but I think that problem is solved now and one of the last bastions of PDF is coming from courses authored in LaTeX.

3 Depending on whether the competitor is considered commercial and/or whether we license things for non-commercial use only.