TinCan API & Learning record Stores

So we have all likely encountered SCORM at some point and will have heard of or use tools such as Xerte, Captivate or Articulate to produce materials.

Although at Napier there a few Xerte & Captivate users a number of Articulate Storyline licences – some floating & some dedicated – were purchased to allow more colleagues to experiment on their own and in the case of named licence holders to work on specific projects.

Now I'd been using Articulate and its associated app for a while for self-assessment quizzes on dissertation modules and study support resources in law and others – this allows published content to be viewed within Moodle as SCORM 1.2 and when published to a non-authenticated website could be downloaded to users iPad or tablet articulate library when accessed via those devices.

I was already aware that in order to fully investigate the use of iPad's for higher stakes assessment some form of authenticated connection was required.

Development of the new & fully online, combined Sports Science and Business degree added impetus to greater exploration of the range of publishing options from Articulate.

Of course this would require students to login and with a goal for this course being able to track student progress when accessing and navigating content on mobile devices using the Articulate app it was this in particular that required us to trial use of the TinCan API and use of a Learning Record Store, in this instance SCORM Cloud.

In order to authenticate however it is not as simple as publishing to TinCan and adding the SCORM to Moodle -

So if we briefly look at the various publishing and tracking options in Articulate for Moodle delivery we can publish to LMS

So for some learning objects I had been using simple publishing settings of SCORM 1.2 for LMS delivery with tracking progress set to having viewed all slides and LMS Reporting set to Completed/Incomplete

This setting can be attached to the Moodle courses Progress Bar or Activity Completion conditions.

All this works fine on a desktop but when viewed on iPad we experienced some issues if we allowed download for use on app so the second example here SMUG Evidence removed the mobile app setting.

When we publish the same package to TinCan API and add via the SCORM Cloud plugin we find that we cannot monitor the SCORM Cloud course in the same way so are unable to add to the progress bar that is featured on many courses at Napier, particularly the Global Online course of which the online Sports & Business degree is one.

In order to use the progress bar we need to

1. login to SCORM Cloud,
2. upload the TinCan package
3. create a dispatch shell
4. download dispatch shell
5. Go back to Moodle
6. Add activity or resource
7. Add SCORM
8. Add dispatch shell
9. Adjust display settings as required and save
10. We can then monitor and attach to the Progress Bar

Lessons learned

a. We did experience some installation issues related to the Moodle course format and theme. In essence Moodle was having difficulty recognising more than 1 SCORM Cloud course ID and was only displaying the first that had been added.
b. These only arose in the last week before the course went live as materials were being transferred from a test server to the live environment
c. As a precaution TinCan & SCORM Cloud use was delayed and SCORM 1.2 was used, using the display setting in Moodle alone we were able to deliver working packages.

Academic Input

As we know the design process can be long & difficult and clear goals and requirements can make life much easier.

So a simple question that is hard to answer should be asked: what is it you want to track?

I think that certainly at the start of the process for Sports & Business, the lead academics weren't quite sure and as it was quite new to them got a bit muddled with what they could already do in Moodle and how they could better exploit Articulate and SCORM Cloud.

This led to an initial simplicity in package design & setting completion status in SCORM but we are hopeful that as the course is underway they can now relax a little and work with Steven Fraser, their project based Learning Technologist, to build in more complex variables related to completion and link these to quiz results etc

Learning record Stores

OK – we went for SCORM Cloud.

Although it works we are concerned about the pricing model.

It's not that clear at times as it is not based on the number of students on a course – it is based on the number of SCORM packages per student

So 1 student, 1 course, 5 SCORMS = 5 registrations so costs need to carefully considered.

I am investigating Learning Locker as an Open Source solution – Napier is also looking at a number of analytics packages so it may be that a combination of improved Moodle use in terms of reporting and adoption of different site wide analytics may cover most requirements.

Videos!

On occasion videos that are included in SCORM 1.2 when presented in Mobile Safari don't work properly.

However when published to web as HTML5 output but allowing download to articulate app library – the same videos work. So there is a clear issue which needs further investigation as to whether the problem lies with the Moodle SCORM player or the coding within the Articulate packages not being suitable for Safari.

Questions raised:

So as we move toward more mobile delivery can we be sure that Moodle will cope and that academic staff will have the tools to produce materials independently?

The display and authentication issues when using different operating systems is not something I fully understand anymore and if we are forced to use more and more systems I'm concerned that academic staff could be discouraged from experimenting and that the time and cost of producing materials can increase further.

Can Moodle already provide adequate tracking information for most needs?

I would be tempted to say yes – but I'm pretty sure there is a lot more that can be done

And what of the students?

This short presentation hasn't really mentioned them.

Can they benefit from all of this or just be confused by being presented with more data?