**Course Lifecycle External University Meeting**

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City University, London

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In attendance: Fraser Burgess, Olivia Fox, Silvia Giannitrapani, Mike Hughes, Jill Reese, Aurelie Soulier, Alistair Spark, Julie Voce

<https://web.microsoftstream.com/video/9cda1e60-5406-4ce7-bd6c-cbc57f727846>

**Questions**

Can you describe your end of year Moodle course processes?

What tooling have you developed and implemented?

What automation is in place?

Are there any data integrations from other systems to Moodle?

Why did you choose this model?

What worked well?

What was painful?

What would you do differently?

What do you aspire to do in the future?

Are there Moodle courses not linked to taught modules and is the process different for managing them?

**Context**

Despite a student population half that of UCL’s, City has comparable user needs and challenges, and employ similar systems such as SITS as their SRS, Teams, Echo360, and other LTIs. They have a single instance of Moodle with approximately 18,000 courses. Staff and students can access their previous six years of courses via their dashboard in addition to the current year. They have been proactive in developing custom plugins and processes. While these suit the institution’s needs at the time, as these needs develop, they face the same challenges of making changes to or replacing them as they would with non-custom plugins and other products.

*Discussion summaries follow Mike Hughes’ text responses in bullet points.*

**Can you describe your end of year Moodle course processes?**

MH response:

* creation of next academic year's courses (we call them modules) via SRS
* rollover of enrolments via custom script
* creation of non-SRS modules, custom script (Moodle > Course Upload)
* ad hoc rollover by staff for content once module is created
* separate 'rollover' for Echo360 system
* separate 'rollover' for Reading Lists (Talis Aspire)
* we keep modules for 6 years past current year

They developed an enterprise service bus integration that automatically generates an empty Moodle course shell using data from SITS. The script also replaces year in course short name. This process coincides with the annual Moodle upgrade in which they do the backup and release within 24hrs. Previous years’ courses are NOT made read only and they have not had any issues with changes being made older courses. The intention was to avoid another labour-intensive process.

Course tutors/administrators receive the empty shell and then use a custom plugin tool called ‘course rollover’ that imports from the previous year’s Moodle course but does so at a scheduled time overnight. This helps to ease burden on prem servers.

The rollover plugin excludes LTI links. They developed other processes to (re)establish such links. For example, Echo360 must have a matching hierarchy that isn’t yet within the service bus’ capability. For now, they generate csv files with links that are uploaded to help automate the time-intensive process. This is done by IT staff rather than teaching/admin staff.

Assignments are rolled over but without student data. They developed a workaround for Turnitin submissions, which are excluded from the rollover plugin operations. They admitted that this was due to issues with Turnitin a few years ago, which may not be necessary to avoid now.

Students are enrolled via the service bus, which has real-time integration (accounts, courses, enrolments) with SITS.

Another custom plugin makes courses visible to students on each module’s start date in SITS.

**What tooling have you developed and implemented?**

MH response:

* ESB service bus for SRS real-time integration (accounts, courses, enrolments)
* now with added staff account creation but not enrols
* Rollover plugin for Moodle to enable user to copy content
* MS Teams creation and enrolment via [SDS](https://eur01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fsds.microsoft.com%2F&data=04%7C01%7C%7C551aa6e9073f4c25be6308d8f46263ed%7C1faf88fea9984c5b93c9210a11d9a5c2%7C0%7C0%7C637528050708994784%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C1000&sdata=PcT%2FIus6dv5HnjHKdwrGfBtgW3Sx58ZOfROYxhoCwYo%3D&reserved=0)

In addition to the service bus and course rollover plugin...

Students and staff navigate between years within the single instance of Moodle by using a filter in the Moodle dashboard that differentiates between academic year and term. Mike created the custom filter that uses the coding for the current academic year and term that is also used in SITS. This eliminates the need for course end dates and the Moodle defaults of past, in progress and future courses.

They also have a custom plugin to make courses visible based on their start dates, which sometimes causes problems if the information is incorrect in SITS or if the Moodle course isn’t ready for students.

**What automation is in place?**

MH response:

* as above ... staff and student accounts, modules and enrolments
* we also have a new automated system alongside that creates a MS Team for each module with same enrols from SRS

**Are there any data integrations from other systems to Moodle?**

MH response:

* not relating to end of year processes but ...
* Echo360, Kaltura, Turnitin, timetabling, learning analytics (Jisc), various LTIs

Until three years ago, they used [IBM WebSphere](https://www.ibm.com/cloud/websphere-application-server) but worked with consultants to transfer over to the [Microsoft BizTalk Server](https://docs.microsoft.com/en-us/biztalk/) for their service bus. They are currently working to incorporate additional platforms to which the service bus links. The intention is to ensure all data is in service bus so that it can not only be used by other systems but can be stored and transferred in the future should they decide to discontinue Moodle. The service bus works in real time so as soon as a change is made in SITS, it updates across other systems. As an example, they recently began to include new staff account creation so they no longer need to wait for a new member of staff to log into Moodle the first time before their Moodle account is verified. Course tutors must be listed in SITS in the past and future module in order to be copied over to new Moodle course.

In the past year, they introduced MS Teams creation and enrolment via [Microsoft School Data Sync](https://sds.microsoft.com/) that generates a team for each taught Moodle course. They think that modules are using it but it is difficult to gauge the level of uptake given the lack of available analytics from Microsoft.

**Why did you choose this model?**

MH response:

* we wanted to keep each year of content separate and available to students during their time at Uni
* wanted SRS to be the source of 'truth' as far as possible

Aside from wanting the student records system to be the source of truth for student data, the discussion revealed that the previous process didn’t require teaching/admin staff to take part in the process because IT was rolling over or creating courses for them. There was a drive in IT to see what could be pushed onto users rather than IT staff. The plugin was created to help facilitate the process while scheduling it to run overnight.

**What worked well?**

MH response:

* the ESB integration is great

Being able to schedule the rollover plugin to run overnight helps ensure that there isn’t too much running during times in which Moodle is used most.

Staff generally either like the rollover plugin or are used to it. Olivia explained that it gives course tutors a sense of control over the process and that it is triggered to run overnight so it is ready for them the next day.

The capabilities of the service bus continue to be developed to improve the transfer of data across different systems.

Having staff use the rollover plugin has reduced that kind of work for IT staff.

**What was painful?**

MH response:

* all of it

There were several initial and ongoing challenges:

The first was to get staff to do the rollover process since this had previously been done for them.

The second was that each school had developed their own templates and wanted to continue them. The variety didn’t work well with the rollover plugin. Instead, a single course format was designed and applied to every course that uses collapsed topics.

Another ongoing challenge is to accommodate changes in institutional ‘default policies’ that then need to be adjusted in the rollover plugin.

A final challenge is that the data in SITS must be accurate and the way information is coded must be identical across systems.

**What would you do differently?**

MH response:

* would have been nice to do more with service bus and automation sooner

The strong consensus is that they wouldn’t develop the rollover plugin because Moodle already offers the ability to backup, restore, copy and import content and courses. They created it because the task can be scheduled and not overload the system if too many were doing so at the same time.

Bulk course creation isn’t feasible by using the rollover plugin. They would have developed this had they anticipated that course administrators would generate a large number of the courses.

It doesn’t address the issue of out of date content being rolled over. Olivia is working on getting staff to import instead of using the rollover plugin while being mindful of what is essential and took a great deal of time to develop. However, the filtering of unused content won’t be addressed if course administrators rollover courses since they won’t know what can be excluded.

**What do you aspire to do in the future?**

MH response:

* further eliminating manual 'legacy' processes like creating Echo360 sections

They are slowly working with staff to move away from the rollover plugin and to import content instead. The challenge is that people are familiar with the rollover plugin so it is difficult to get rid of it.

A script had to be generated for Echo360 links and uploaded in csv files. They want to develop process to use the service bus for these links as well as those for other LTIs.

They attempted different projects to transfer assessment marks to SITS but each have failed. They still export marks via gradebook, modify the excel file and then upload to SITS, similar to UCL’s process. DCU and Strathclyde were mentioned as having successfully integrated marks between systems but they required major changes in marking and recording processes as well as limiting the kinds of assessments possible.

Overall, they want to expand service bus functionality to be a bit more transferrable in case they move away from Moodle, and so the service bus can work with other LMS and apps.

They are starting to do work on how users get cleared out of courses and if/how to delete full year’s worth of Moodle courses as is stipulated by data retention policies. They is hesitancy to move forward with deletion should government policies change.

**Are there Moodle courses not linked to taught modules and is the process different for managing them?**

MH response:

* explained above I hope ... these are manually rolled over using scripts and Moodle course upload and user upload for enrols.

The process for ‘timeless’ Moodle courses wasn’t discussed in depth but their process implies that they are nonetheless ‘rolled over’ manually rather than simply continuing on year after year.

**Other comments and suggestions**

Mike suggested [Power Automate](https://flow.microsoft.com/en-us/) (used to be Power Shell) with Office 365 that helps with workflow automation as a place to start service bus development.