

A Case Study of the pedagogical and technical redesign of one particular course, the Secondary PGCE Pre-Registration course (Pre-Reg, hereafter). I demonstrate my approach, process, and considerations I consistently apply and evaluate, in this case, on a bespoke, 'unicorn' module performing multiple duties for a very specific type of learner - although in this case, my learners were both the students themselves, and the staff who would be delivering the course.

How I learnt about the students

Having been the dedicated Learning Technologist for the Institute of Education throughout 2018, I had provided inductions to PGCE students, operated first and second line response for almost all staff and student technical and pedagogical issues pertaining to the VLE and Turnitin, and attended all available programme boards and team meetings. This consistent interaction with staff and students at key points in the year, and also day-to-day, meant that I had a wide opportunity to meet, collaborate with, support and gain feedback from this core group. I also had full access to all their modules and usage data from previous years, which provided useful database context.

What I learnt about the students

Secondary PGCE students begin their admissions process in the January of the academic year they are starting their course. Students span a wide range of ages and familiarities with higher education – from new graduates, to those who left university in an analogue age thirty years' ago. Students tend to be very 'geared-up' for the beginning of their course - many are either embarking on a career change they have planned for for some time, and are excited to realise it; others are coming to it with a determination that, via circumstances sometimes out of their control (for example, unexpected redundancy), this will be a new and exciting opportunity that they may have embarked upon quickly, but are absolutely keen to get the most from.

The nature of the Pre-Reg course

To provide an opportunity to bridge any skills gaps and to prepare students for a particularly intensive one-year course combining study, assessment and placement experience, St. Mary's Secondary PGCE students get access to, from 1st May - or from as soon as they accept their place on the course, as students can continue to enrol up until the course begins at the end of August - the Pre-Reg module on Moodle. This has traditionally been used to provide course outlines, reading lists, fora for students to begin to get to know each other, and subject-specific details and challenges for their specialist

areas. The site is divided into sections which include general welcome sections, administrative details, a calendar, and then a section for each discipline - so, Science, Mathematics, History, P.E., Geography, R.E., Modern Foreign Languages, and English.

As well as giving the students an opportunity to practice and prepare themselves for the course, the Pre-Reg site also performs the important task of harnessing the particular enthusiasm observed in PGCE students, who would often email moments after accepting their offer asking for reading lists, early tasks, or more information about what to expect. The PGCE is a one-year course, which includes at least one placement section, so it is intensive and with little room for error. The programme hits the ground running, so the Pre-Reg site is often heavily leant to get students used to the VLE and engaged and on board with the types of content and learning experiences they could expect from the rest of the year.

Finally, the Pre-Reg looks to provide course tutors with an idea of their students prior to course commencement. Just as students hit the ground running, so do the staff, so the Pre-Reg provides the ideal opportunity for staff to get to know their students in as much detail as possible, to best prepare to guide, support and educate them to the standards required.

Identifying the issues

In 2018, we experienced a number of issues with the pre-registration site – first, expectant students were coming to it before it was populated with content, as staff were unaware that students were able to see the course, and secondly, as population began, content was not consistently added across different subject areas. Thirdly, the page was extremely large, with each subject visible to every student – the ‘scroll of doom’ was epic, and, regardless of their specialism, the student would have to scroll through a huge number of sections in order to expand their appropriate collapsed topic. Having arrived at the topic, the students were often met with folders or lists of wonderful resources, but without explanatory notes, were unsure as to what they ought to do with them.

The consequences of these issues were that students' initial experience of Moodle was confusing, and that it, in some way 'didn't work'; that, where the course was fully populated, it was difficult to navigate, and thirdly, that there was an overwhelming amount of information. A few students thrived on this, but, looking back at the engagement statistics for the page, it's clear that many students logged on when they first had access, dabbled in one or two items, and then didn't return to the course until they had to complete a piece of paperwork placed there right before their semester began.

In 2019, the TEL Team face the additional challenge of upgrading the VLE theme in July, meaning that the page will be active during our transition, and needs to function as well in the existing setup as in our new Snap theme. The TEL Team are working with teams across the university to prepare for this shift, but with Secondary PGCE having by far the earliest start, we decided to prioritise the Pre-Reg site, using it as a model for developing the conversation around the pedagogical shift from Moodle as a repository, to as an active part of a course's pedagogy.

The Plan

- To move from our current VLE to the upgraded, rethemed version with minimal disruption for staff and students.
- For Secondary PGCE students to get the best possible start at their degree, avoiding the issues experienced by the previous cohort
- To make the most of initial student enthusiasm, consolidating it in scaffolded learning and preparation for the course (Allan, et al., 2009).
- To maximise the opportunities arising from the necessity of training for all staff delivering on the Pre-Reg site by combining it with pedagogically-sound principles, giving them the opportunity to try out Moodle features such as Groups, Conditional Release, and Activity Completion with a view to evaluating them and, all being well, extending usage of these features into full course modules in the coming year.
- To develop a solid method of delivering content through the existing site, with each resource clearly reasoned, labelled and maintained in accordance with RASE methodology (Churchill et al., 2013)
- For the TEL Team to refine their training methods and better understand staff/student requirements prior to rolling out training across the university.

We began by meeting with the Programme Directors (one of whom, Nigel, has kindly provided a short testimony as to my contribution, see Reflection, below), both keen Moodle users, with strong ideas for their students' Pre-Reg goals. We worked with them to create a Welcome section with a short video introduction, worked to reformat early tasks (introduction forums, short, on-subject knowledge tests), and, crucially, to create a timeline for content population and for 'unhiding' the module which would be disseminated to all programme staff required to complete their sections on this module, to avoid the issues with students seeing an unpopulated space.

I recommended that, where previously students were met with long lists of uncategorised suggested reading, staff simply linked to the Talis reading list for the module as a whole, and used its functionality to section out Core,

Recommended and Suggested texts. Students would thus have the opportunity to engage immediately with Talis, and, on a technical level, the Content and Resources team responsible for Talis would be able to harness the usage and data of these materials from these students, which was previously not being accounted for, where the reading list was simply pasted into last year's course.

In order to avoid overwhelming students with content, to prevent enthusiastic students bolting through content or more nervous ones simply disengaging entirely, my colleague and I suggested enabling Conditional Release based on Course Completion, so students would be able to access content on completing a previous exercise. In some cases, so as not to separate out students by their enrolment date too much, staff were keen to set up content to be released on certain dates, which we could also set up for them. By having Course Completion enabled, staff have the additional benefit of being able to see, at a glance, how their cohort is engaging with the content, and which students have and haven't participated.

I had previously worked with staff from the Centre for Workplace Learning to implement these changes in their modules, and to restructure a final year module which had similar issues in terms and engagement and student activity, and so I had strong feedback from both lecturers, engagement statistics, and from and students at the relevant programme boards to back up the potential positives of introducing these features to the Pre-Reg site.

Finally, staff were asked to justify directly to the student any resource they wished to include, to avoid the long list of PDF icons. Using the Label or File Description area, it was suggested that the student be directly informed as to why the file was there, and what outcome was to be expected from engaging with it. Where these were key resources, I encouraged staff to create a short task, asking the student to reflect on the resource in the form of a forum post, which would get them used to the practice of responding to resources, get them used to the concept of reflective writing, and give them content to look back at and potentially even cite in their portfolios they would create to consolidate their learning of teaching.

We then returned to the Programme Directors to create Groups for the students to be split into so that students would only see their general content and the content relating to their specific specialist subject, rather than being overwhelmed by, or limited by, seeing, even in collapsed form, topics and content for every single specialism. The unfiltered Pre-Reg sites of previous years were extremely tricky to navigate at the best of times and were not device-compatible. As we move to our upgraded Moodle site, the build and theme will become responsive and will lend themselves well to both the structural and pedagogical format we hope to adopt.

Screenshots in Appendix 1 and 2 display the "before" and "after" of last year's Mathematics section of the site, and this year's Mathematics section of the site, also demonstrating the Group restrictions overlaid, and the conditional release in action. Appendix 3. demonstrates Activity Completion, and the overview it gives staff, quickly enabling them to see which students have and haven't engaged with which items, or which items appear to be a sticking point for students. We will be meeting again with the Secondary PGCE team at the end of June to reflect on the ways students have, to date, engaged, and make any adjustments as required.

Reflection

Having worked with staff to create the Welcome, Science and Maths segments in this new, student-led format, my colleague and I took sessions with the remaining 7 programme lecturers individually in order to create their sections, and to help shape their tasks to their students' particular needs (for example, History were keen to have students write a short introductory post on their favoured period of history, to get an idea of their particular interests and enthusiasms). Overall, staff were extremely positive and responsive to our suggestions, and, whilst the additional one-to-one attention did occasionally have the effect of bringing other, unrelated issues to light, this was a positive outcome in the long run, illustrating again the value of working extensively and directly with an entire programme. A further benefit of this was the inherent 'peer pressure' of doing this, and the keenness to achieve parity amongst student specialisms - by leading with the Programme Directors' Science and Maths sections, other areas were keen not to be 'left behind'. We were able to continue with this 'whole programme' approach to training and overhauling our approach to and consideration of digital pedagogy, as we worked with every programme over summer 2019 in preparation for our Moodle upgrade.

As students begin to engage with the course, I have been regularly monitoring their engagement and activity completion rates, and am delighted to see improvement on last year. Staff report higher rates of completion of exercises that existed last year, already, a good sense of their early enrollers, and, to date, we have not had a single student issue reported. As the upgrade took place, the students moved from the existing Moodle theme to the new one with apparent ease, and there was no drop in engagement around this, suggesting our hopes that the design would fit suitably into the new theme and that students would be able to intuitively continue as they had begun were fulfilled.

I received the following evidence from one of the Programme Directors attesting the following to my involvement, and to prospective future of the course:

Abi has worked with several members of the secondary PGCE team to develop the subject pages and content on MyModules. One of the main developments has been to transform the MyModules page from simply being a repository for resources into a more interactive environment to support learning on the subject. As well as enhancing the experience for the next cohort of students, this has been a learning curve for the teaching staff too, for example, the ability to track and monitor the engagement by individual trainees. Abi has explored the way we work with my modules to understand our needs as teachers and also what we expect from our learners and using her understanding has helped us to develop the content accordingly.

Each of the subjects across the secondary PGCE is expected to use MyModules in a similar way, to ensure the consistency of experience for all students but given the different skills and engagement fo, the teachers involved this has not always been as consistent as it might be. Having had the input from Abi to subjects individually and a future session for the team as a whole, I envisage the consistency of experience for the trainees to be much higher next year and in subsequent years.

Nigel Wills, Programme Director - Secondary Partnerships; PGCE(S) Mathematics Tutor.

I had wondered if we might face more resistance to the changes we implemented to the Pre-Reg site than we actually met - I was glad to have put the time in gathering information and comments on the previous year to back up our suggestions, but in the end, staff were more than happy simply to have some guidance and recommendations, and, as a result of the fact that we needed to ensure the site would flow through the upgrade process without losing content or navigation, and that, accordingly, I and my colleague needed to work hand-in-hand with the team, they were emboldened by our presence, and, without exception, keen to try out new features and design.

Having provided support for both staff and students through the initial, difficult stages outlined, I was able to identify the issues related, and to begin to strategise, as the year progressed, as to how we might avoid repeating them this year. Having been Institute-specific, I had a strong existing relationship with staff, which made collaborating on something that was quite a substantial change a pleasure, rather than the challenge some of them had anticipated. My familiarity with the content and usage of the module, and of the subsequent modules students would be required to take, meant that

relating the value of features such as Course Completion and Conditional Release to the forthcoming academic modules was straightforward, and well accepted. Finally, having been the conduit for a number of student issues with the previous module, which I revisited to consolidate and support our plans for the redesign, it was, again, easy to qualify our suggestions and recommendations, even where they called into question something that had, to the academic, appeared a good choice.

In drawing on this recent, and indeed ongoing experience for this portfolio, I have found myself aware of the importance of cataloguing this process, and that which is to follow, as we extend the learning design throughout the academic modules, and, eventually, to other programmes across the university. We have had a rare opportunity to work with an entire programme, mindful of the most granular of requirements, and thus far, it's been a highly positive example of productive staff-student-services engagement. I've learnt so much about the teaching and learning choices we are currently making, and it will be fascinating to compare and contrast the 18/19 data with the results we receive in 19/20, where we will have, assuming continued and extended take-up of our suggested features, engagement data and reflection built into modules from day one.

References

Churchill, D., King, M., Webster, B. & Fox, B. (2013). Integrating Learning Design, Interactivity, and Technology. In H. Carter, M. Gosper and J. Hedberg (Eds.), *Electric Dreams. Proceedings ascilite 2013 Sydney*.(pp.139-143)

Allan, J., Clarke, K. & Jopling, M. (2009). Effective Teaching in Higher Education: Perceptions of First Year Undergraduate Students. In *International Journal of Teaching and Learning in Higher Education*, 21(3), 362-372.

Appendix 1: Before

Mathematics

 Maths Course Guidance 2016-17


 Maths Session Calendar


[Hidden from students](#)

 Maths Trainee Timetable 2015-16

[Hidden from students](#)

Below is the Subject Knowledge audit that you completed prior to your interview. During the course we will be using the Subject Knowledge on the NCETM website. You might like to explore the NCETM website www.ncetm.org as there is a wealth of information there. You will have to register and create a username, but this is free to do.

 Subject Knowledge Audit - MA

 Maths Problems


 Maths book list


 vision-full-report-20140625

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 Noyes

[Hidden from students](#)

 7 x 8 What's the problem?

 Is it all in the genes?


 Maths Anxiety in Twins

 Progress 8

[Hidden from students](#)

 How hard is the maths GCSE?

[Hidden from students](#)

 Why do people hate maths?

 Learning Theories

[Hidden from students](#)

 Mistakes and misconceptions

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[Back to top](#)

Appendix 2: After

Mathematics

Restricted Not available unless: You belong to Mathematics (hidden otherwise)

Your progress

1. Introduce Yourself

Please use the forum below to introduce yourself to the group. You can do this with text or a (short) video. Click "Add a new discussion topic"

In your video or text you should say

- Who you are (put your name as the subject of your post)
- Academic background e.g. what course/subject you did
- Previous career (if appropriate)
- What area you will be living during the PGCE year
- What are you looking forward to during the course
- Interests, hobbies and skills e.g. unicycling or baking.

Introduction Forum

2. Maths Problems

Here are some maths problems for you to try before the course starts. When you have tried them, please respond with the activities below.

Maths Problems

Restricted Not available unless: The activity Introduction Forum is marked complete

Maths Problems Feedback

Restricted Not available unless: The activity Maths Problems is marked complete

Please let us know how you got on with the maths tasks

Maths Problems Upload

Restricted Not available unless: The activity Maths Problems Feedback is marked complete

Please use this tool to upload one of your solutions. You can do this as a picture or pdf scan of hand-written notes or as a word document - whatever is easiest for you.

3. Module Information

Here you will find last year's module handbook and the Maths Module Reading List.

The reading list will give you an idea of the range of reading available for the specialism. If you would like to start with any text before September we would recommend Boaler: The Elephant in the Classroom.

Course Tutors

Preet Singh preet.singh@stmarys.ac.uk

Nigel Wills nigel.wills@stmarys.ac.uk

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Maths Module Guide 2018-19

Hidden from students

This is the Module guide for LAST YEAR. It is included here as an example and general information only.

This year's Module Guide will be available on the Maths Module at the start of the course in September

Reading List

[Home](#) [My Lists](#) [My Bookmarks](#) [Feedback](#) [Log In](#)

Relink? To change the linked list or section [click here](#)

Appendix 3: Activity Completion

Visible groups Role

1 2 3 4 5 6 7 »

First name / Surname	Last in course	Completion Progress	Progress
	Tuesday, 7 May 2019, 10:39 AM	Submit Your SMART Targets Here Not completed ❌	0%
	Wednesday, 22 May 2019, 10:12 PM	Attendance and AbsenceAs part of a trainee teacher... Not completed ❌	0%
	Never	Maths Problems Not completed ❌	0%
	Never	Submit Your SMART Targets Here Not completed ❌	0%
	Never	Submit Your SMART Targets Here Not completed ❌	0%
	Sunday, 12 May 2019, 4:06 PM	Submit Your SMART Targets Here Completed ✅	36%
	Never	Submit Your SMART Targets Here Not completed ❌	0%
	Wednesday, 22 May 2019, 8:37 PM	Submit Your SMART Targets Here Not completed ❌	0%
	Never	Submit Your SMART Targets Here Not completed ❌	0%
	Sunday, 19 May 2019, 5:43 PM	Submit Your SMART Targets Here Not completed ❌	0%
	Thursday, 2 May 2019, 11:29 AM	Maths Problems Not completed ❌	20%
	Never	Maths Problems Upload Not completed ❌	0%
	Never	Maths Problems Not completed ❌	0%
	Wednesday, 22 May 2019, 8:05 PM	Submit Your SMART Targets Here Not completed ❌	0%
	Tuesday, 21 May 2019, 4:19 PM	Submit Your SMART Targets Here Completed ✅	20%
	Saturday, 11 May 2019, 3:57 PM	Attendance and AbsenceAs part of a trainee teacher... Not completed ❌	13%
	Monday, 20 May 2019, 9:03 AM	Attendance and AbsenceAs part of a trainee teacher... Not completed ❌	0%
	Saturday, 18 May 2019, 4:28 PM	Submit Your SMART Targets Here Completed ✅	25%
	Never	Attendance and AbsenceAs part of a trainee teacher... Not completed ❌	0%
	Never	Attendance and AbsenceAs part of a trainee teacher... Not completed ❌	0%