Title	Podcasting for Maths: an evaluation
Subject area	Construction Management – Construction Science Part 1 Module
Scope and context	A significant proportion of the first year students in the School of Construction Management and Engineering have not practiced any mathematics since GSCE. This poses a challenge in the teaching of construction science which as students often lack confidence in applying basic mathematical techniques. Further compounding this challenge are the large class sizes in which part one modules are delivered (typically up to 140 students). A new blended learning approach has been developed specifically to support students in the development of the maths skills needed. This includes the traditional lecture, buttressed by online formative quizzes, and tutorials, supported by video podcasting. This project focuses on the appraisal of how successful the podcasting approach has been for a number of different students.
Rationale and aims	Whilst the traditional module evaluation mechanisms provide a robust data set for the quality assurance and enhancement needs of the University they are not as well suited to providing insight into the effectiveness of different pedagogical approaches. The success, or not, of a pedagogical approach could ultimately be judged by the learning which takes place at the individual's level. This type of data is best elicited through less structured research methods such as interviews. The evaluation of the podcasting approach will employ a theoretical underpinning loosely informed by the literature on the social construction of technology. This will provide a rich data set to compliment the more quantitative data from the module evaluation forms and statistic data from Blackboard. It will to: • Develop an evaluation of the podcasting approach which is complimentary to the traditional module evaluation approaches used. • Evaluate the usefulness of podcasting to support the teaching of maths dependent construction materials and structures (as part of the construction science module). • Provide a direction to the further development and implementation of this type of blended learning approach within SCME. A key objective for adopting the blended learning approach which includes maths pod/screencasts is to help struggling students in large classes.
Digital literacies addressed	Blended learning approaches including the use of pod/screencasts prepared using an iPad and PC.
Overview	Tim Lees initially approached the Director of T&L for support on the project as there was a clearly identified need to provide enhanced support to students who were struggling with maths. He approached the task in a "blended" fashion – preparing the pod/screencast materials at the same time as preparing lecture materials. The podcasts are simply to construct. They are made by cloning an iPad screen onto a laptop and running a basic screen capturing programme which is capable of

	recording audio simultaneously. Podcasts have been made to demonstrate the worked answers to the tutorial questions and in response to the demands from the students as and when they have occurred.
Digital resources and know-how used	Tim kept the level of technological know-how low so that it would be relatively easy for other tutors to adopt the same approach. The technologies used were IPad, PC and a screen-casting programme.
Benefits and impacts	At the time of writing this case study, the evaluation report has not been completed. However, there is a large amount of informal feedback that the students have found the experience to be a positive one and for the module concerned, there is no dissatisfaction with it – in fact there is 80% positive feedback with 20% neutral. Tim half expected that students would use the materials mainly before assessment, however the VLE stats show that usage has been consistent throughout the module. Students are also requesting other members of staff to produce the same types of materials. For students, the key benefit is that the materials provide an extra resource that can be studied at any time. For Tim, his workload has been significantly reduced as he has embedded many of the queries/questions that students raise into the materials and he can thus refer students to the materials whenever they raise such a question.
Conclusions or lessons learned	• It is not necessary to have a high standard of production – it is inevitable that mistakes will be made during recordings and tutors should "learn to live with them" – students do not mind such mistakes. • There was a technical challenge in getting the iPad to "talk" to the PC on the university network so Tim ended up preparing the materials at home. • The university needs to better support such DIY approaches through e.g. technical support for "innovations", simpler procurement of software and "local" support from e.g. Directors of T&L (which was present and critical in the success of this approach). • Tim has enjoyed the experience and it has helped him to refresh his teaching materials – there is also satisfaction that students found it useful.
Links and further information	The evaluation report will be made available on the Digitally Ready web-site in due course.
Further opportunities	Tim would like to explore the use of e-books – where it is possible to e.g. create multimedia hot-links to content e.g. a maths equation can be clicked on to show a video. Furthermore, students can comment on text – and share such comments with other students – this is considerably more powerful than having to use a separate asynchronous discussion forum on the virtual learning environment as discussion are focused on the core content of the learning materials. This approach is slowly diffusing through the school – Tim is showing other tutors how to use the technology – and they see the benefits of investing time in creation of such materials to ultimately reduce their workload.
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	http://www.reading.ac.uk/CME/about/staff/t-j-lees.aspx