Footprint timetable: the next step

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Introduction

Over the past three years, Innovation North Faculty of Information and Technology has radically redesigned its curriculum and has been innovative in its assessment, learning and teaching practices. The Faculty aims to enhance the student experience by facilitating truly student-centred and personalised learning experiences within flexible learning spaces (both virtual and physical). For example, tutorials take place in so-called base rooms that have on average three tables, each of which can accommodate ten students. The rooms are enabled for wireless networks and students can borrow laptop PCs from nearby reception areas. The following set of delivery models and assessment designs has been developed to guide delivery teams in the development and delivery of courses and modules:

- footprint timetable models
- team-based allocation of staff
- challenge-based assessment with explicit outcomes (evidence-based assessment)
- creative use of learning spaces.

Inspiration for the development of these models was drawn from the change in modes of social communication among students (Kent, 2004; JISC, 2007) and the delivery and assessment models that are becoming common practice in the school and FE sectors. Edexcel (the UK's largest qualifications awarding body) offers a number of assessment models designed to facilitate students' engagement through units (or blocks), which allow them to evidence their achievement both rigorously and flexibly, utilising blended learning styles.
This paper presents an overview of how such radical changes have been used to shape curriculum delivery for the Faculty.

The concept

The broad aim of footprint timetabling is to consolidate the student experience in terms of:

- time – by providing larger 'chunks' of learning
- space – by utilising appropriately furnished rooms
- staff – with shared team responsibility for a group of students
- flexibility – by allowing greater scope to be responsive to students' learning needs.

In a pure footprint model, there are a number of pre-conditions for implementation. However, it is possible to adopt the footprint model with a degree of flexibility in its operation. Indeed, the model used by Innovation North uses a set of variants that allows students to interact with more traditional delivery models that are necessitated by Faculty-wide timetabling of resources.

The implementation

In Innovation North, the full model has been implemented in one discipline area where students study a range of multimedia, including games design and animation. Here, the footprint model is structured through the team-based organisation of three academic coaches and support staff assigned to three teams of 30 students. The staff team is responsible for the totality of the student experience and assessment pathways within the constraints of the scheme. The team is multi-disciplined and its members use both their generic and their specialist skills in curriculum delivery. For example, re-usable learning objects may be used by any member of the team to support the delivery of a tutorial or provide an introduction to a technique, thus allowing specialist knowledge to be imparted by the appropriate member of the team elsewhere in the timetable.

The timetable for each team is designed at an aggregate level using four three-hour blocks. Within these blocks, the team is responsible for designing the learning experience so that the students can achieve the learning outcomes of their set of modules. A synoptic lecture is scheduled at the beginning of each week, which may either be a large lecture for briefing sessions linked to the level of study, or smaller cluster sessions for delivering the week's challenges. Specialist resources are timetabled as a breakout session equating to approximately 20% of the footprint timetable. This parameter depends upon the nature of the award and additional specialist resources can be timetabled if required.

Variations in implementation

In addition to the standard footprint timetable, other disciplines within the Faculty have designed a slightly different curriculum to meet their specific needs and access to resources. The Music and Computing disciplines, for example, require specialist studios and laboratory resources. In these areas, access to resources has been a major factor in constraining the design of the curriculum. While both Music and Computing are able, in the main, to follow the footprint timetable design, there remains an element of restriction on resources. The curriculum delivery largely follows the pure footprint model by grouping tutorials and lectures together on separate days, thus reducing the spread where attendance is required throughout the week. Tutorials are timetabled to be consistent throughout the year and delivered in three-hour blocked sessions. Small staff teams design the curriculum around the modules to be delivered within the footprint timetable rather than holistically across the level. Teaching is timetabled in a seven-week 'carousel' around the availability of specialist studios and laboratories. A significant difference is that the curriculum is designed by a specialist module team who teach and lecture all classes for each module, whereas in the pure footprint model staff teach all of the subject areas at a given level.

Challenge-based curriculum

These radical changes to the curriculum structure suggest that new approaches to designing it may be required. This view is supported by Morgan (2007) who explored past and present changes to the curriculum in his paper *The new basics: changing curriculum for 21st century skills*:

> "The new economy needs people who are innovative, flexible, creative and who have high levels of emotional and social intelligence. This requires a curriculum that allows these skills and abilities to develop."
> (Morgan, 2007)

In the pure footprint implementation for Multimedia disciplines, the challenge-based curriculum design is supported by the team-based structure of the staff responsible for three cohort groups of students. The team considers the context of the award and designs an appropriate series of challenges that flow thematically throughout the students' first year. Appropriate learning objects are then selected or designed with clear mapping to the achievable outcomes for that level. Although the challenges can be aligned explicitly with individual modules, this is not a requirement. This is an important factor to note as challenges can be used as an effective way of introducing synoptic (or integrated) assessment, where multiple learning outcomes are achieved through one piece of work. Synoptic assessment can be useful in reducing the workload of staff and the burden of assessment on students. Challenge-based learning also offers students a flavour of real-world experience and industry practice that may enhance their future employability.

Examples of challenges are:

A 3-hour challenge
Computing students have been accessing learning objects and practical training related to the installation of a computer network. Their tutors have designed a challenge to assess their competence in network installation.

The challenge is to implement and test a small office network in a university lab within three hours. Students are given an appropriate set of computing resources, including hardware, to implement their objective.

The challenge takes place at 1pm. The tutors monitor the students' progress. Feedback is given at 4pm.

A 1-day challenge
Multimedia students have a split day on their footprint timetable on Monday, which means that they have a timetabled tutorial session in the morning and the opportunity for a breakout session in the afternoon. Their tutors have designed a challenge that will address outcomes relating to teamwork, video editing, audio editing and web-streaming.

The challenge is to produce a 60-second advert showcasing Headingley campus, the people, the places. Students are briefed on the challenge during their morning tutorial block and introduced to the technology to be used and techniques to be applied. They are given two hours to plan their advert and to go out on location to capture the shots they need. They return to their footprint base-room at 3pm. They have two hours to edit their final production and upload the results to a given website.

Production is reviewed by peers and tutors. Feedback is given.

Challenge-based curriculum allows the delivery team to design assessment activities from a variety of modules. More radically, the model allows students to identify and claim their own mapping for evidencing their learning outcomes in a flexible manner.

Conclusions

The Multimedia discipline has wholly adopted the pure footprint model, while the disciplines of Computing and Music have adopted the model in its broadest sense, contextualising content where possible but finding alternative pathways to incorporate and integrate modules. The approach is now embedded in the first-year student experience, with further modifications to streamline all disciplines in the same way planned from September 2008. While the migration to this new approach is not yet complete, the management of change for teaching staff has been found to be a significant factor in defining appropriate timescales, as is paring down the number of modules offered on awards. Staff were supported and encouraged in the adoption of these new ideas by staff development sessions before the course began, together with ongoing support sessions during the course at which they could discuss any problems or queries.

A formal survey of student and staff reactions to this new approach is currently being undertaken and initial impressions are positive. For example, some staff felt that the attendance seemed generally better than under previous systems and the students appeared to form strong bonds within their tutorial groups, gaining a sense of identity and belonging to their chosen discipline. The curriculum seemed to have benefited from the ability to arrange sessions in creative and flexible ways and has given staff the opportunity to work closely with colleagues in designing a responsive curriculum. A detailed evaluation of this redesigned curriculum and its innovative assessment, learning and teaching practices is in progress, and further details will be available later in the year.

Future plans for developing the footprint timetable approach to curriculum design and delivery should enable the improved integration of modules to facilitate synoptic assessment.

References

Edexcel (2004) *Introducing the 50/50 model*. Available at: **http://www.edexcel.org.uk/subjects/a-z/ btecschools/ri/curric-des/** [Accessed 28 April 2008].

JISC (2007) JISC *Learner Experiences of e-Learning Recommendations for IT managers and staff*. Bristol: Joint Information Systems Committee (JISC). Available at: **http://www.jisc.ac.uk/search.aspx?keywords=social %20communication&filter=s** [Accessed 28 April 2008].

Kent, N. (2004) Different worlds? A comparison of young people's home and school ICT use. JCAL 20, 440-455. Available at: **http://www.futurelab.org.uk/resources/publications _reports_articles/external_publications/External_ Publication630**

Morgan, J. (2007) The new basics: changing curriculum for 21st century skills. *VISION Magazine*, January 2007. Available at: **http://www.futurelab.org.uk/resources/publications _reports_articles/vision_magazine/VISION_ Article254**

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