Research note: incorporating innovative personalisation into a range of business school courses

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Introduction

This note discusses an evolving set of principles for the incorporation of personalisation into learning materials at a business school. It is a response to the availability of innovative learning environments that broaden the scope for educational materials, delivered electronically, to be tailored to a particular student's requirements. In the case of the authors' institution, an important driver is the move to Moodle 2, which offers a range of features based around the idea of conditional release of content. However the principles and taxonomy discussed here are not specific to institutions using Moodle, or indeed to those using any sort of conventional virtual learning environment.

Historically an element of personalisation has been provided within the authors' institution, at both undergraduate and postgraduate levels, by the provision of a range of elective subjects. In terms of curriculum design, this is not a risky method, but it does mean that the ability to include certain subjects can be precarious if they are not chosen by enough students to justify offering them. The expectations that students currently have in terms of products and services being personalised are closer to those associated with the *long tail* (Hintz et al, 2011) with the implication that the combination of a large number of tailored products can satisfy a large proportion of a market, even when each individual variant of the product is only supplied in very small numbers. Istance (2011) regards provision of 'deep personalisation' as a key characteristic of future learning environments.

A key objective of the personalisation project, around which this note is based, is to create a set of design principles, based around instances where personalisation can enhance existing courses. This is informed by Laurillard's (2012) concept of teaching as a design science.

Instances of personalisation

Two types of innovation were initially considered:

1. Predominantly for undergraduates, to take account of the problems arising from sharply increasing diversity in incoming student prior capabilities and styles relative to key core modules. How can the delivery methods for large groups take account more realistically of such diversity? The first year, of the undergraduate courses with which the authors are concerned, is already structured to provide an element of different content to students with different level of prior knowledge, notably by offering a much more comprehensive introduction to mathematics and statistics for those who have not studied these at A level or the equivalent. Feedback from undergraduate students has indicated that there would be interest in providing material, in a range of subjects,

more closely tailored to individual students' prior abilities and the use of new technology offers promise in achieving this. This could be summarised as "tailoring for a whole cohort". It is an example of using personalisation to reduce the diversity of the cohort, by taking in a group of students with varied attitudes, expectations, knowledge and skills, and ensuring that all members of the cohort achieve a baseline level of understanding.

2. Predominantly for postgraduates, the particular aim by contrast relates to "narrow and small" personalisation. This will enable experienced practitioners to "round off" the necessarily generalised education provided by core and even by elective modules. This includes in particular possibilities for innovation in the area of Digital Enterprise, in part due to the growth of interest from the Digital Shoreditch/Tech City initiatives relating to the creation of a cluster of high-technology businesses in one part of London. One illustrative radical idea which was first proposed as early as 2003 for postgraduate personalisation was the "one hour, one student" module. This was much less feasible in 2003 than it is in 2013 with now much improved technologies. MBA and executive education students embark on their studies with significant and valuable business experience and there is potentially a connection between personalisation, and co-creation of content with students with experience in niche areas. This is an example of using personalisation to increase the level of diversity of the cohort, by encouraging niche skills and areas of knowledge.

While the initial assumption was that the first category would be most appropriate for undergraduates and the second most appropriate for postgraduates, it rapidly became apparent from discussions with course directors in particular that opportunities existed to put both categories into practice across the range of undergraduate and postgraduate courses.

Furthermore it became apparent that there were economic and logistic ramifications around the implementation of personalisation. The experience of personalising mathematics and statistics provision in the first year reinforced this. Personalisation had proved successful in this case partly because the subject was taught in the same way across a range of business, management, and finance degree courses. Therefore there were enough participants for it to be feasible to run face-to-face tutorial sessions with a large number of small groups, which were allocated so that students shared their tutorials with others who had a comparable background. But this could only be achieved by setting aside a significant amount of time each week for the subject, and to replicate this same tutorial pattern in a different subject would have created insurmountable problems in timetabling.

A further factor is that on occasion subjects which start as areas of specialist interest, attract more students and develop into popular elective choices. Within the authors' institution this has been observed notably with an elective option on arts markets, which was first identified by a small number of students as a possible area of interest but has become a popular choice for final year students.

A palette for personalisation

Personalisation of learning materials can take several different forms. For this project a range of different levels of personalisation was identified:

- *Specialised* personalisation refers to the provision of very specific, tailored, specialist content that is appropriate for a particular learner's requirements
- *Stylistic* personalisation refers to keeping the same content, but delivering it in ways which suits the individual learner's preferred learning style, or other aspects of their preference. So stylistic personalisation would offer the option to deliver content in more or less visual forms, for example, according to whether the content was being read by somebody with a preference for visual learning. Stylistic personalisation would extend to the ability to translate content into different languages, and to deliver it through different electronic channels – for instance either through a web browser or an app on a mobile device
- *Outward adaptation* refers to relatively minor changes, such as choosing the colour scheme or detailed layout for course material available electronically. This can be important in fostering a sense of ownership of the learning process among learners, but does not alter either the content or the way in which it is delivered.
- *Unpersonalised* refers to completely standardised course materials.

The two categories of personalisation identified in the previous section are mapped onto two different learning journeys as follows:

- *The standard learning journey* depends on students achieving a certain common level of understanding. The instance where students start with a variety of backgrounds and acquire a common level of knowledge is where personalisation can contribute to a this type of learning journey
- *The personalised learning journey* depends on students working towards a range of different goals and learning about issues that might suit their own interests. The instance of "narrow and small" electives in particular subjects is an example of this type of learning journey.

Combining the two categories produced a palette of possible approaches from which educators could draw ideas. This is represented below, with examples of what could be achieved with some of the possible approaches:

Standard learning journey	Personalised learning journey	Design of teaching approach
Personalised navigation: facilitation for students to find the supporting resources that suit them best	Deep personalisation: individual or tiny group study of self-defined areas on interest	Specialised
Choice of interactive, text, or visual approaches to learning basic economics concepts	Diverse choice of dissertation research approaches within an inter-disciplinary masters	Stylistic
Tailoring students' presence on a virtual learning environment with photos etc	Choice of a pathway of modules or subjects to follow	Outward adaptation
Baseline: conventional teaching and learning to a whole cohort	Small group teaching of specialised elective material	Uncustomised

Next steps

The palette is useful as a tool for identifying possibilities where personalisation could be implemented, by supplementing the baseline of teaching and learning at the bottom left of the diagram with other approaches. It can also be used to identify opportunities for change. For instance in cases where the traditional combination of uncustomised learning and a personalised learning journey, through the availability of specialised electives, has proved unfeasible because of limited numbers, there could be scope to introduce a combination of a personalised learning journey and specialised material, where students would be invited to choose areas of interest and work with staff to develop learning resources in these areas. In cases where there are deficiencies in the ability of students to follow the standard learning journey, there is scope for supplementing the baseline materials. For a subject such as economics, where one of the challenges for students is to become confident with the terminology used, there are particular attractions in offering stylistic personalisation which would steer students towards material which presents ideas in ways that they can relate to.

But the palette also offers the basis of a set of design principles which could be adopted in producing new personalised material.

References:

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