Student engagement: deep, surface or strategic?

Mantz Yorke
Visiting Professor, Lancaster University

Abstract

Institutions, educators and students are increasingly being challenged by governmental expectations that higher education should contribute to economic success. The challenges are made more severe when policy drivers include the widening of participation; a desire for high levels of course completion; expectations that students will demonstrate their ‘employability’; and the espousal of lifelong learning.

The first year experience in higher education is a period of transition – from school; or from a background of broader experience of life. For some, it is critical to success. The engagement of students in higher education is influenced by a number of factors – for example, how they finance their studies; how they balance studies and part-time employment; and what they see as their aims in undertaking a programme of study.

This paper places student engagement in a broad socio-cultural context; discusses, with reference to studies of the first year experience in Australia and the UK, how policy and practice at various levels can influence students’ achievement; and offers some suggestions which may help to increase the level of engagement, and hence students’ success.

Policy drivers

Governments around the world have taken a ‘human capital’ approach (Becker, 1975) to the relationship between higher education and the state, the underlying presumption being that, if the working population is as highly educated as possible, then the national economy should show the benefit. Three broad areas of governmental interest (whose salience will vary according to the way in which state and higher education system are related) are as follows.

1. Higher education as the engine of the national economy implies
   - Maximising the level of participation in higher education
   - Satisfying employer expectations
   - Sustaining a culture of lifelong learning.

2. State funding for higher education is a ‘something for something’ deal in which the state is concerned to target resources where it believes it can get an optimal return for its investment. This is characterised by the promotion of
   - Research selectivity
   - Graduate employability and employment
   - Student retention and completion
   - Quality assurance (and enhancement) of academic programmes
3. The relative contributions of stakeholders to the funding of higher education, typified by policy relating to
   - Student contributions to the costs of studying in higher education
   - State funding for teaching and research (the latter through various channels)
   - Encouraging higher education institutions to become increasingly entrepreneurial.

The first year experience engages directly with some of these drivers, and indirectly with others. Of particular relevance to this paper are matters related to student success, which are connected in varying ways to the interests of students themselves, institutions, and employers.

**Student success**

In the context of the first year experience, success is probably best viewed in terms of the extent to which the student (from a school or other background) is able to adjust to the demands posed by study in higher education. The obvious signals are those of engagement (e.g. attendance, fulfilment of curricular requirements) and performance (e.g. grades). The signals may not always be clear, since some students take longer than others to come to terms with the demands of higher education and may perform relatively weakly to begin with but end up by achieving very high standards, thus leaving their study programme with what some term a ‘high exit velocity’. Longer-term indexes of success are related to the development of the qualities and achievements which are not only valued by employers (often labelled in terms of their employability\(^1\)) but which also sustain a lifelong commitment to learning, to personal development, and to the betterment of society.

Too often, student success is ‘measured’ by indicators such as retention and completion rates, and by the proportion of graduates obtaining ‘graduate-level’ jobs. These are relatively easy indexes to apply, which is why state agencies use them, despite their conceptual and methodological weaknesses. Where institutions are pressured by the state, they normally go along. From the student’s point of view, success may be a very different matter, involving not only achievement in academic terms (and this subsumes a successful transition into higher education) but also coping in parallel with competing demands on their time.

The massification of higher education is necessarily accompanied by a very considerable diversity in the student body, which can be characterised in terms of a variety of demographic variables such as age, gender, ethnicity, national background, socio-economic status, the need to care for dependants, whether the student is the first of their immediate family to enter higher education, and so on. The student’s particular background characteristics will have a bearing on how they construe success, and how they make ‘trade-offs’ between competing demands. A major issue in the UK, following changes in the funding support for students that began with the incoming Labour government of 1997, has been the level of part-time work that students feel obliged to undertake in order to minimise the threat of debt arising from full-time study\(^2\). However, threat of debt is not the only influence on students’ engagement. Students may, as McInnis (2001, p.6) pointed out and Krause et al (2005, p.52) have evidenced, use part-time employment to fund ‘extras’ beyond basic needs.

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\(^1\) ‘Employability’ is distinguished from ‘employment’ because of the vulnerability of the labour market to factors outside the control of the individual (for discussion of this point, see Linke, 1991; Yorke, 2004).

\(^2\) Some in the UK suggest that full-time students are in practice part-time students because they do not devote the expected amount of time to their studies. However, financial stress is a function of socio-economic background, tending to be lower for the relatively well-off, and there is probably an economic gradient to the ‘part-timeness’ of students registered as full-time.
Cultural and social considerations

For some students, higher education is a very different world from that they have experienced to date. These students often do not have a family background that can pass on knowledge and understanding accrued by previous generations – what Bourdieu and Passeron (1977) termed ‘cultural capital’ – and hence face a more challenging transition than peers who are advantaged in respect of cultural capital. Choy (2002), summarising evidence from three longitudinal studies in the US, noted the positive influence of parents who had gained a bachelor’s degree on student persistence and completion.

It is not only the disadvantaged who have difficulty in identifying how to respond to academic expectations. A study at the University of Tasmania (Waters, 2004) exemplifies the problem, with some students floundering when the first assessment deadlines loom. Students responding to a study by Pargetter et al (1998) indicated the need for guidance on various academic issues. It is not surprising that students who at school may have been encouraged to regurgitate what they have been taught or told to read find themselves facing a charge of plagiarism through ignorance of the academic disapproval of ‘cutting and pasting’ (metaphorically, if not literally or via paraphrase3). As Thomas et al (2004) remark, the problem is exacerbated when students are studying in a second language and afraid of making linguistic mistakes by using their own words4.

Further, students have to come to terms with a different educational regimen, which may produce a dip in performance as they adjust (Fischer and Connell, 2003), facing them with coming to terms with receiving lower grades than they obtained in school.

Social integration

Social integration into the institution has been shown to be influential in student attrition and retention. Braxton and Hirschy (2004) reviewed a large number of studies based on Tinto’s (1993) theorising and demonstrated that whilst the empirical evidence in support of the validity of the social integration construct was quite strong, this was not the case with that of academic integration. Higher levels of social interaction in higher education are associated with greater satisfaction (Pascarella and Terenzini, 2005). One attempt to encourage social integration involves a diverse group of students meeting academic staff, counsellors, language and learning staff, and the chaplain in an informal environment, the BusEco Club. This ‘provides students an enhanced level of peer group support in an integrated supportive environment’ (see Tennant and Jackson, 2004, p.3). The informal engagement is intended to enhance the willingness of students to seek assistance from appropriate institutional staff members when problems arise.

In research on non-completion in England, Yorke (1999) came across occasional instances where a student had withdrawn because they felt out of place in the particular academic environment, due to their difference in social class compared with their peers. There is evidence that some intending students select institutions on the basis of a presumed ‘social fit’ (e.g. Forsyth and Furlong, 2003; Reay et al, 2001; Read et al, 2003).

3 See Warn (2006), for instance, on the difficulty of characterising plagiarism.
4 The profile of issues that are significant for student success may depend on the student’s origin (see, for example, Hicks et al (1998) and Morgan and Kutelieh (2004)).
Diversity and the heterogeneity of experience

Students have to cope with a range of competing desires and obligations. Five can be summarised as:

- Learning
- Earning
- Socialising
- Hobbying
- Caring

to which others can be added, such as the need for international students to adjust to a different culture and possibly also to studying and living in a second language.

Sticking to the five listed desires and obligations, the responses of an entrant direct from school may be very different from those of a young woman returning to higher education after a break, and who has family dependants. The different emphases that such ‘ideal types’ might give are indicated in Figure 1. The patterns would be different for other ‘ideal types’. Whilst, from an institutional point of view, a cohort of students might be following the same curriculum, different students may perceive the totality of their experiences very differently, with consequences for their educational attainments.

Figure 1 symbolises the kinds of ‘trade-off’ that students make. There is an element of ‘satisficing’ here, in that students cannot reasonably be expected to calculate the optimal utility of a basket of possible actions and, instead, perhaps make choices that they expect will give them a ‘good enough’, rather than an ideal, result. As Simon (1979, p.3) noted, human beings – who have limits to their rationality – have to satisfice in the presence of complexity and uncertainty.

![Figure 1](image_url)

Entrant from school 25 year old woman with family

Figure 1 Differences of emphasis between two different ‘ideal types’ of entrant to full-time study.

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5 The pursuit of a pastime which may be individual rather than social, though there is a potential overlap with ‘socialising’.

6 First suggested by Simon (1957, pp.204-5), ‘satisficing’ has undergone some changes in meaning as the concept has been explored. See Byron (1998) for an indicative commentary.
A student at ‘University F’ in a study by Brennan et al (2005) of debt and its effects hints at satisficing behaviour when saying:

… [part-time work] has affected my studies definitely, I think, because everything for me is a rush, I have never got time to do what I think is the best that I can do, it is the case of I don’t have time because I have got to move on, I have got to go to work, this is enough I can see this is a pass … so that is me lots of times.


This study showed that part-time work has multiple effects, with only around a quarter of the sample not being adversely affected. Not surprisingly, the incidence of adverse effects correlated positively with the extent to which the student was engaged in part-time employment. There was a negative correlation between the amount of time spent on part-time employment and academic achievement, as measured by term-time marks and honours degree classification.

Deep, surface and strategic approaches to learning

Satisficing comes close to the notion of being ‘strategic’ or ‘achieving’ in one’s approach to learning. A so-called strategic approach to learning involves the student using deep and surface approaches to learning as he or she deems appropriate. Hence a deep approach might be adopted, say, to parts of the study programme seen as vital to future employment, whereas a surface approach might be used for a more peripheral component. The student with a strategic or achieving approach seeks an optimal outcome in which the ratio of achievement to effort (if ever it could be computed) is high. One might characterise being strategic as ‘playing the game’ to best personal advantage, using ‘cue-seeking’ (Miller and Parlett, 1974), taking short-cuts to the completion of assignments, and so on. Such behaviour, of course, may not be optimal (or ‘strategic’ in a broader sense) for the longer term, but may be a consequence of the instrumentalism implicit in political linkages between higher education and obtaining an appropriate graduate-level job, and in curricula where short-term achievements (in separate study units) are implicitly encouraged.

Figure 2 is an attempt to link the well-known concepts of surface, deep and strategic approaches to learning with the distinction that Dweck (1999) has drawn between performance and learning goals. ‘Performance goals’ are those by which a student seeks to demonstrate superiority of achievement or, defensively, to avoid having their weaknesses exposed to view. ‘Learning goals’ are held by students for whom the engagement with the subject is the most important thing, and hence they exhibit the characteristics of a deep approach (engaging with the subject matter, going beyond the minimum curricular requirement, making connections with other concepts, evidence, and experience, and so on).

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7 The commentary does not do justice to a complex project in which a range of variables was studied. Sections 7 and 8 of the project report merit closer attention than is possible here, even though the outcomes refer to student experience beyond the first year.

8 Humphrey (2006), in a study in a research-led university, suggests that the effects of part-time employment on academic achievement may be tempered by the school background from which students are drawn.

9 The word ‘strategic’ seems a misnomer for behaviour that is often short-term and tactical, which is perhaps why ‘achieving’ has become more widely used as a label.

10 In my own case, learning the elements of ‘double-entry book-keeping’ which formed a (supposedly broadening) component of my degree studies in Metallurgy.

11 With plagiarism being one possible consequence.
At first blush, one might be tempted to a dichotomous perspective in which performance goals are ‘bad’ and learning goals are ‘good’. However, there is considerable evidence (Pintrich, 2000; Elliot, 2005) to show that students possessing ‘approach’ performance goals (i.e. who strive for high levels of achievement) could attain outcomes comparable to those who had adopted learning goals. Poor outcomes were associated with ‘avoidance’ performance goals (i.e. those in which the fear of poor performance was the driving motivation).

The first year experience in Australia and the UK

The Centre for the Study of Higher Education at the University of Melbourne [CSHE] has produced a set of valuable reports on the first year experience in a sample of Australian universities (McInnis and James, 1995; McInnis et al, 2000; Krause et al, 2005). This work covers both full-time students and those studying in other modes. The UK has lagged behind in studying the first year experience on a substantial scale, although a number of institutions have undertaken ‘in-house’ studies for the purpose of enhancing the first year experience. The publication of performance indicators for higher education institutions12, coupled with excited comment in the press, have together been influential in this regard. The Higher Education Academy in the UK has funded a study by Yorke and Longden, in which Phase 1 consists of a survey, undertaken in the spring of 2006, of the first year experience of full-time students13 and Phase 2 consists of a retrospective survey, to be conducted early in 2007, of the reasons for leaving their institution given by students who did not return to the second year of their programmes. For convenience, the phrase ‘UK study’ will be used in this paper as a shorthand for Phase 1 of Yorke and Longden’s study.

12 These were first published by the Higher Education Funding Council for England, but are now published by the Higher Education Statistics Agency (recent reports can be accessed readily from the HESA website, www.hesa.ac.uk ).
13 A report of the Phase 1 work is expected to appear on the Higher Education Academy’s website (www.heacademy.ac.uk) in Autumn 2006.
The UK study comprised a questionnaire survey conducted in class time\textsuperscript{14} (in order to maximise the response rate), and covered nine broad subject areas\textsuperscript{15} sampled across 23 varied institutions in the UK. The questionnaire, set up for optical mark reading, was limited to 79 questions\textsuperscript{16} on four sides of paper: piloting showed that students could be expected to complete it within 20 minutes, which was felt to be the maximum acceptable to the participating institutions. The number of subject areas surveyed per institution was limited to a maximum of three. Although institutions requested some 20,000 questionnaires in total, the actual distribution of questionnaires in institutions varied widely. 7,421 responses were received, of which a number had to be discarded because they were blank\textsuperscript{17}; because response patterns suggested ‘yea-saying’ (a mere 8); or because the questionnaire had been treated with jocularity or obscenity (5). The proportion of usable returns was around 95%. The main sources of possible bias lie in the way that institutions actually distributed the questionnaires that they had requested, and in student absences on the day that the questionnaire was administered: the magnitude of these biases cannot be easily estimated, though one might anticipate that student absence would bias the responses towards the more diligent.

For the purposes of this paper, the responses were grouped according to their content and the mean score per group of items used in the analyses is used as a broad summary at a number of points. This inevitably loses some of the subtlety in the data, but nevertheless allows some rough comparisons to be made with the CSHE series of studies.

Although the details of the CSHE and UK studies differ, and the former has the advantage of trend analyses covering a decade, some common themes emerge.

\textit{Demographics}

Participation in higher education in both Australia and the UK is influenced by socio-economic background, and the participation from the less privileged in society has proved resistant to policy interventions (James, 2002, p.6; DfES, 2003, p.17). In these two countries, as in the US, the gender balance in higher education has reversed over a number of decades, from a male:female ratio of roughly 3:2 to one of roughly 2:3. Whereas Krause et al (2005, p.70) reported that male students tended to come from higher socio-economic backgrounds, and analysis of the UK data showed very little difference in the demographic profiles of male and female students whose domicile was the UK.

\textit{Sub-group responses, in general}

Krause et al (2005, pp.70-1) noted a number of differences related to gender, particularly in females’ greater motivation and commitment. In the UK study any differences are very muted, the main differences in the two groups’ means being around 0.1 on a 5-point scale. Females were marginally more committed to reading related to their studies, and to have lower levels of commitment to activities external to higher education.

As Krause et al (2005, pp.71-2) reported for Australians, older students in the UK study gave generally more positive reactions to their experiences, with differences often being more

\textsuperscript{14} In a very small minority of circumstances, the survey took place outside timetabled classes in order to accommodate institutional needs.

\textsuperscript{15} Subjects allied to medicine; biological sciences; psychology; computer science; engineering and technology; social studies; business and administrative studies; humanities (represented by English studies and history); and creative arts and design.

\textsuperscript{16} The vast majority of these sought responses on a 5-point scale running from ‘strongly agree’ to ‘strongly disagree’.

\textsuperscript{17} Students unwilling to respond to the questionnaire were asked to return blank forms, in order that an estimate might be made of ‘willingness to complete’. This would give an upper boundary to the estimate, since some blank responses might not be returned by individuals.
pronounced when the students were aged 26 and above. In comparison with their younger peers, they had been better informed about the institution and/or programme; perceived the teaching as more stimulating; reported that they better understood the academic demand; undertook more background reading; were more positive about the feedback they had received; and perceived the staff to be more friendly. However, they were less likely to be engaged in the social side of higher education and more likely to have external commitments. As one would expect from the inherent correlation with age, students who had had previous experience in higher education showed a very similar pattern of responses.

The student experience was perceived in much the same way by students irrespective of socio-economic status [SES]. In the UK study, and limiting the analysis to UK-domiciled students, those from less privileged backgrounds were slightly less well informed about the institution and/or programme, and slightly less engaged in the social side of the higher education experience.

Again limiting the analysis to UK-domiciled students, ethnicity produced greater divergences in response than gender or SES. Black and black British students were more positive about stimulating teaching and understanding the academic demand, followed by white students and then by Asian, Asian British and Chinese students. However, white students perceived the supportiveness of the teaching to be higher than any other ethnic grouping. Asian and Asian British students reported lower levels of prior information about the institution and/or programme than any other ethnic grouping. White students were more positive about the friendliness of staff, institutional resourcing, and their engagement in the social side of higher education. On the other hand, they were less positive than the other groupings about undertaking reading in respect of their studies.

Students from outside the European Union were, in the UK study, marginally more positive about the feedback they had received and had done marginally more background reading. They were a little less likely to engage in the social aspects of higher education. The differences are much slighter than those reported by Krause et al (2005, pp.76-7), but may reflect the differing cultural profiles of Australia and the UK, and of the international students that these two countries attract.

Choice of field of study and motivation

Although the relevant items are different in the CSHE and UK studies, there are similar conclusions regarding the high level of students’ satisfaction with their choices of studies and with, paradoxically, the appearance of some problems regarding motivation, as evidenced in some reluctance to do background reading and attend classes. Despite the recent tightening of financial support for students in the UK, there remains a minority of students who find that they have made a poor choice of subject (Yorke, 1999; Davies and Elias, 2003), and it seems that there is scope to improve decision-making regarding entry to higher education.

The instrumentalism of higher education is captured in high levels of expectation that academic success would be appropriately rewarded in the labour market. As Krause et al (2005, p.14) note: education has in many ways become more focused on career and job outcomes and on preparing students for employment, as is evident in university marketing activities’.

Although the category intervals are different from those employed by Krause et al (2005, p.53), the general patterns of part-time employment by full-time students in the CSHE and UK surveys are similar, with the modal number of hours worked per week being in the region of 6-12.

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18 Where it is undertaken: 44 per cent of UK respondents said that they undertook no part-time employment.
Experience of the course

According to Krause et al (2005, p.31), roughly three quarters of Australian students put in four or five days on campus: the proportion for the UK study is a little lower at close to two thirds. A substantial minority in both countries found the standard of work in higher education to be higher than expected, with Engineering figuring as a subject area in which the challenge was very marked. Subjects allied to medicine in the UK proved a little more challenging to the students than did engineering, perhaps because of the combined demands of academic studies and practical work on wards.

Academic programmes were held by a majority in both countries to be stimulating – by three quarters in Australia and by two thirds in the UK study. Further, half of the respondents in each country reported that the teaching was stimulating, with strong majorities indicating that the quality of teaching was good. Students in the UK study had a more positive view of the feedback that they had received, with 57 per cent agreeing that it had been helpful whereas the comparable figure from the Australian students in 2004 was 33 per cent (Krause et al, 2005, p.62). There may be a connection here with students’ perceptions regarding coping with academic demand, where the mean of the Australian ‘Comprehending and coping’ scale was close to the mid-point of the 5-point scale at 3.02. However, the mean for a differently-constituted but broadly similar UK scale was 3.28 (against a high of 5) and for a scale reported in Pargetter et al (1998) was 3.44. Studies of non-completion in the UK (Yorke, 1999; Davies and Elias, 2003) have shown that academic difficulties are one of the main causes of withdrawal (voluntary or otherwise).

Resources

There was, in both countries, a very high level of satisfaction with institutional library and computing facilities. No more than 10 per cent indicated dissatisfaction for either of these aspects of provision.

Social aspects

The more time a student spends on campus, the greater their engagement with other students (face-to-face or electronically) regarding academic work; their development of friendships at the institution; their enjoyment of the social side of higher education; and their sense of belonging to an academic community. These findings from the UK study exhibit strong similarities with those reported from Australia by Krause et al (2005, p.32). The proportions in the UK study indicating that they engaged with other students were 50 per cent for face-to-face meeting and 54 per cent for electronic communication. When the use of either form of communication is the criterion, the percentage comes very close to the 71 per cent reported by Krause et al (2005, p.39). A little over half of the students in both countries said that they felt part of an academic community. Nevertheless, just over a quarter of Australian respondents (though the proportion was much higher for indigenous students) and four in ten of UK respondents tended to keep themselves to themselves at their institution.

Around two thirds of Australian students claimed to be known personally by at least one of their teachers. In the UK study, a stricter criterion of ‘at least two members of academic staff’ knowing the student by name was adopted. This was because an assigned personal tutor might well know the student by name, but might in some cases have little to do with the student on a day-to-day basis. A shade over half of the UK respondents agreed that the academic staff met this criterion. (What this misses out is the often unsung importance of support staff, who may be in a position to help students to deal with problems, and hence to contribute to their sense of belonging.)
**Possible withdrawal**

Broadly comparable proportions of students (a little less than 30 per cent) had given some thought to the discontinuation of their studies, either permanently or temporarily.

**Some implications for practice**

**Distractions**

The higher education environment has a number of distractions from the quality of teaching and learning – some obvious, others less so. The more that curricula are built around expected learning outcomes, the more the performative is implicitly accentuated, and the more the *process* of learning is backgrounded. The more reliance that is placed on learning resources, the more the social aspect of higher education is put at risk. The tighter the resource base of an institution, the more difficult it is for the institution to sustain student:staff ratios at relatively favourable levels. The more the gaining of research contracts and entrepreneurial actions are encouraged, the greater the risk to teaching and learning.

**Institutions and leadership**

Carey (2005a; b) reported that an important feature of successful institutions in the US – not necessarily the ‘top’ institutions as far as academic repute was concerned, but those which consistently performed better than peer institutions as regards student graduation\(^{20}\) – was a strong institutional commitment to teaching and learning that was championed by the head of the institution. These institutions had worked hard at engaging with their students.

Institutions in the UK that did better than benchmark expectations regarding retention and completion were shown to have been particularly strong in relation to activities drawn from the following, and in which there is a strong social element (Thomas et al, 2001; Yorke and Thomas, 2003):

- Commitment to the student experience
- Pre-entry and early engagement with students
- Curricula attuned to widened participation
- Curriculum treated as a social arena
- Emphasis on formative assessment, especially in the first semester
- Allocation of resources preferentially to first year studies

There is a strand in these findings that suggests the value of an institution-wide commitment to student learning. In the UK, graduate employability has been promoted strongly as an aim of the higher education system. The Enhancing Student Employability Co-ordination Team [ESECT] developed an approach to employability that aligns with ‘good learning’ in general, and which has found acceptance in quarters where some scepticism might have been anticipated. The following sub-section needs to be read with general student success, rather than the narrower concept of employability, in mind.

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19 There is some overlap with Krause’s ‘Ten working principles for enhancing student engagement’ (Krause, 2005, pp.8-10).
20 In the UK, this would be seen in terms of ‘beating the official benchmark’ of expectations.
Employability and good learning

Employability is one (albeit ‘soft’) index of success, and its promotion ties in quite closely with the need for students to make successful transitions into higher education. The USEM approach to employability (Knight and Yorke, 2004) explicitly addresses issues relating to ‘the personal’ that other approaches (Bennett et al, 2000; Barrie, 2004) do not. Underlying USEM was a belief that, in a climate dominated by outcomes, aspects of students’ personal development were at risk of being underemphasised.

USEM is an acronym for four interlocking educational aims which may be fulfilled not only through the explicit curriculum but also through co-curricular activities and activities beyond the reach of either:

- **U** understanding of subject discipline and broader situations
- **S** skilful practices in subject, employment and life
- **E** efficacy beliefs and personal qualities
- **M** metacognition.

The interlinking of the four is illustrated in Figure 3, which shows the pervasive influence of ‘E’.

The ‘E’ component is a portmanteau of psychological theory and empirical evidence which is far too large to unpack in detail here. It subsumes the following: motivation (Pintrich and Schunk, 2002); ‘self-theories’ (Dweck, 1999; Dweck and Molden, 2005); goal orientation (Elliot, 2005); locus of control (Rotter, 1966); self-efficacy (Bandura, 1997); ‘learned optimism’ (Seligman, 1998); ‘successful intelligence’ (Sternberg, 1997), emotional intelligence (Salovey and Mayer, 1990, but popularised by Goleman, 1996) and the link between cognition and emotion (Boekaerts, 2003).

The metacognitive component (‘M’), which stems from Flavell’s (1979) paper, involves the possession of general strategies for thinking, learning and problem-solving; the capacity to differentiate between tasks, recognising that different cognitive strategies will be needed for different tasks; an awareness of how one tackles tasks and deals with teamworking situations, and self-regulation.

![Figure 3](image-url) The USEM approach.
The stress on ‘E’ and ‘M’ is deliberate. In a substantial meta-analysis of experimental interventions on learning (mainly in schools but also containing some studies from higher education), Marzano (1998) found that the largest statistical ‘size effects’ were found when the interventions concentrated on the ‘self system’ (here represented by ‘E’) and on metacognition. These findings point strongly towards educational activities which tie in with the ‘E’ and ‘M’ of USEM.

The ‘E’ of USEM can, by connecting with Boekaerts’ (2003) work, pick up on the excitement and enjoyment of engaging in higher level study. Meyers et al (2004, p.6) evidence the positive affect of studying when they report students as saying, in respect of a pilot study unit at Queensland University of Technology, *Animal and Plant Structure and Function*, on which some 300 students were enrolled:

I enjoyed using my initiative ……..
I enjoyed learning about building an ecosystem and how the environment affects the type of organisms that can grow there.

[Emphases in the original]

The unit was rated 4.5 out of 5 in 2003 (after the redevelopment of the unit, and compared with 3.9 two years previously), which indicates that the above comments were not outliers.

Perhaps higher education in general should edge its offerings in the direction of ‘disciplinary wonder’ (Barnett, 2004, p.255) and away from the technical rationality implicit in the ‘skills agenda’.

*A welcoming and supportive environment*

Students need to feel welcomed into the institution. A feeling of being welcomed is developed through the quality of initial contact, and through induction programmes that engage with students as individuals (and, where appropriate, as beginners to academic study) and do not simply overload them with information. Transition programmes of various sorts can be very helpful to students’ adjustment to higher education (e.g. Peat et al, 2001; Layer et al, 2002; Jones and Abramson, 2003). A sense that a student belongs to an academic community (seen, in different ways, by Tinto, 1993; Mentkowski and Associates, 2000; and Read et al, 2003) may not simply happen as a matter of course – it needs fostering.

One way of fostering involvement is to send out a sequence of informative e-mail messages to students: two of the many comments reported by Kift (2004, p.12ff) testify to their motivational qualities:

thx heaps 4 ur motivation email ☺ Chih (Week 11 Sem 1, 2003)
I just would like to say thank you for all those emails that you have been sending to us during the semester. They are very motivational, encouraging, funny and interesting. Being a mature age student and from a non-English speaking background I have experienced some moments when I thought that [it] was too hard and impossible to continue my university studies. However, I am still here and looking forward to the end of semester. Once again, thank you very much. Your encouraging words really helped me a lot. Maryana [19/05/03]

*A culture of learning*

If the culture is not manifestly supportive of student learning, then students may not be as successful as they could be, and they may abandon their studies. In their qualitative study of the student experience in science, mathematics and engineering in the US, Seymour and Hewitt (1997)
pointed to academic cultures that were indifferent to, and in some instances inimical to, student learning. Contrast this with the responses to Meyers et al (2004, p.8), whose study unit (noted above) attracted comments such as the following:

The assignments were fascinating, they made me think about where I am really heading with my studies and making a career in science.

This unit made me think more than any other unit I have ever done.

In my five years at uni., until this unit, I haven’t had any assignments that made use of my problem solving skills! Thanks!

It made me think and formulate ideas which I have never done extensively before in three years of uni.

These are evidence of the kind of engagement that any serious educator would like to see!

**Formative assessment**

Higher education is, at root, a social process – even if the learning takes place at a distance\(^{21}\). The components of USEM, for example, will in general be developed more successfully through the interactions of staff with students, especially through formative assessment. As Black and Wiliam (1998) reported, following a substantial meta-analysis of studies of formative assessment which – like Marzano’s (1998) – were dominated by school-based investigations, formative assessment can produce size-effects of considerable magnitude.

The importance of formative assessment for learning was highlighted in a survey response from a student who was pursuing a foundation degree\(^{22}\) in science:

I found having large blocks of work without assessment difficult – you don’t know if you are grasping it or not until exam time! Assignments weekly would be better from my point of view.

Bandura (1997, p.217) provides a rationale for early and frequent formative assessment which is particularly pertinent to students coming to terms with the demands of higher education:

The less individuals believe in themselves, the more they need explicit, proximal, and frequent feedback of progress that provides repeated affirmations of their growing capabilities.

When faced with the challenge of giving greater emphasis to formative assessment, a number of academics say something like ‘That’s all very well, but classes are too large for this to be feasible’. A response might be to say that the challenge demands some creativity in response. Kift (2004, p.16), for example, describes the provision of formative feedback to a large group at Queensland University of Technology studying *Legal Institutions and Method* [LIM] which was modified to provide

… increased opportunities for detailed feedback on written assessment items earlier in the first semester to identify students experiencing difficulties. In *LIM*, despite the large enrolment (n>700), students receive written, individualised feedback from their tutor on three items of formative assessment, with the first feedback returned to students in week 3; peers review two items submitted in tutorials; while the opportunities for structured self-assessment have been enhanced – in particular, in Week 7, students self-assess their assessable tutorial participation against the criteria published in the unit Study Guide and receive feedback on that self assessment in the following week from their tutor.

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\(^{21}\) The Open University [OU] in the UK has a strong reputation for interacting with its students, and the feedback given to students on a number of programmes has been characterised by various auditing exercises as of a very high standard. It is no surprise to find the outcomes of the National Student Survey leading to the OU being placed highly across a range of subjects (see Shepherd, 2005).

\(^{22}\) Equivalent to two years of full-time study in higher education in the UK.
Another imaginative response to the challenge is to follow the general approach advocated by Winter (2003) and other contributors to a special issue of *Innovations in Education and Teaching International* that is devoted to ‘the patchwork text’. The basic idea is for students to undertake a number of short assignments that together make up the assessment demand for the study unit in question. Short assignments can be marked relatively quickly, and feedback is rapid enough to be useful for learning purposes. In this example, the assessment is a combination of formative and summative, but a student can perform relatively poorly on some assignments without prejudicing an overall pass.

**Curricular structure**

Curricula need to favour student success. Semesterised curricula in which assessments are only summative reduce the potential for student learning. Further, if the assessment ‘counts’ towards a qualification, then students (being strategic) will tend to play safe and not to take risks with their learning. Yet having things go wrong, and learning from mistakes and mishaps, are part of the learning experience (see, for example, Rogers, 2002): should not curricula and assessment regimes allow for the possibility that a student may ‘fail safely’, and hence allow for learning from the experience?

**Approach to teaching**

Teaching needs to favour student success. There is now an extensive literature on constructive alignment, approaches to teaching, teaching large groups, teaching small groups, active learning, and so on. The growing concern with plagiarism raises one aspect of the need to inform students clearly regarding what is expected of them – they need to know the ‘rules of the game’ early in their time in higher education. Precepts of various kinds regarding academic expectations are all very well, but need to be backed up with exemplifications, as Wolf (1995) showed was necessary for staff (let alone students) in the context of assessment. Colleagues in the Student Assessment and Classification Working Group [SACWG] in the UK have been looking at institutional assessment regulations, some of which seem to have the complexity of an international treaty: how well do students understand the rules of this particular game?

Many academic colleagues seem not to see formative assessment as part of the process of teaching and learning, perhaps implicitly taking anything to do with assessment as something done at the end of a block of curriculum. The staff resource in an institution is necessarily expensive, and one key contribution to institutional effectiveness (and also, but secondarily, efficiency) would be to deploy that resource in such a way as to maximise the chances of student learning.

**The importance of ‘the personal’**

There has been an underlying theme to this paper – that of the importance of ‘the personal’ in higher education. The erstwhile Teacher Training Agency in the UK once used as an advertising slogan:

| No one forgets a good teacher |

perhaps overlooking the fact that the same applies to a bad teacher.

Good teachers are committed to ensuring that students succeed to the best of their ability. Much depends, of course, on the students’ willingness to engage with the demands of learning in higher education. Although teachers cannot guarantee students’ success, they can at least bend the odds in
its favour through their moral commitment to student learning, the attitudes they convey and the
methods that they use. Our students – our future – deserve no less.

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23 The authorship of this report is inadequately attributed on the hard copy, but is properly attributed at the cited URL.


