Designing the Curriculum for Student Engagement*

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Abstract

Over the past few years there has been considerable emphasis on the concept of 'student engagement'. However, in a context of mass higher education, increasing diversity of the student population, globalization and the new marketing of education, and increased competition between universities exacerbated by 'league tables', it is problematic to define 'the best learning environment possible for all students. It is also becoming more problematic to articulate the purpose of a university education with so many different agendas to satisfy.

The overarching aim of this paper is to highlight the need to articulate a powerful pedagogical idea which underpins university level education that can act as the driver for sustainable curriculum and institutional change. Engaging students in the learning process and encouraging them to understand the attributes that will enhance their employability in a fast changing chaotic world must be at the core of the powerful pedagogical idea. This paper will explore the idea of student engagement and how it is being conceptualized; examine the ways in which 'engagement' is currently 'measured' and critique different examples of curricular innovations with the intention of identifying the aspects of learning and assessment which 'engage' and challenge the learners.

Keywords: student engagement, curriculum

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1. Introduction

Over the past few years there has been considerable emphasis on the concept of *'student engagement'*. This is peculiar at first sight, given that the mission of universities is surely to engage students in learning through providing the conditions and the environment in which learning will flourish. However, there are many tensions inherent in academia today. The core business of universities is, or should be, creating the best learning environment for our students. In a context of mass higher education, increasing diversity of the student population, globalization and the new marketing of education, and increased competition between universities exacerbated by 'league tables', it is problematic to define 'the best learning environment possible for all students'. It is also becoming more problematic to articulate the purpose of a university education with so many different agendas to satisfy.

The changing nature of the student population should persuade academic and related staff to question our assumptions about what motivates students to learn. The demographics of the student population have shifted considerably with a higher percentage of international students, more mature students both undergraduate and postgraduate entering into university courses and programmes of study. There are students with non-traditional qualifications, but different life experiences than 'traditional' school leaver level students and higher numbers of students who are the first in a family to enter into higher education. This is a heady mix to satisfy with a vague conceptualization of the 'best learning environment'.

Over the past two decades there have been many initiatives and 'movements' relating to curriculum design, graduate attributes, the relevance of the curriculum in an increasingly digital world. And yet, as educators we seem to be reluctant to do anything other than tinker around the edges of curriculum design. It is as if we are afraid to let go of the control we have always had over what and how students learn – and particularly over assessment of student learning. We still assess that which is easy to assess rather than the more complex life-long learning skills which are really required of graduates when they enter into employment (Elton 2003; Yorke & Knight 2006).

The overarching aim of this paper is to highlight the need to articulate a powerful pedagogical idea which underpins university level education that can act as the driver for sustainable curriculum and institutional change (Nicol & Owen 2009, p.6).

Engaging students in the learning process and encouraging them to understand the attributes that will enhance their employability in a fast changing chaotic world must be at the core of the powerful pedagogical idea. This paper will explore the idea of student engagement and how it is being conceptualized; examine the ways in which 'engagement' is currently 'measured' and critique different examples of curricular innovations with the intention of identifying the aspects of learning and assessment which 'engage' and challenge the learners.)

2. Students, Learning and the Concept of Engagement

Over many years 'engagement' has been a theme in educational research relating to primary and secondary school learning and teaching. Within the tertiary level education sector there has been less of a focus on 'engagement' until relatively recently. At its simplest 'engagement' in an educational context refers to the time, energy and resources students devote to activities designed to enhance their learning at University. Krause (2006, p.5) expands on this definition and posits that:

> The well adjusted and engaged student is one who assesses and re-assesses their thinking as transitions and opportunities to engage in different ways continue through and beyond the first year of university.

This definition offered, while eloquent and succinct, may embody some implicit assumptions. Given the heterogeneity of any student body, it is quite likely that 'engagement' will mean different things to different students. It has to be unlikely that within an increasingly heterogeneous student population, there is one measure or one definition of 'engagement' that encapsulates the level of motivation or the learning goals of each individual student. We might consider that it is problematic to expect all students to 'engage' with learning in the way that academics or funding bodies interpret the concept of engagement, and to be fully 'engaged' in the learning process given the ill-defined terms of reference.

Haggis (2006, p.525) in her research on pedagogies for diversity, takes issue with the assumptions we make in higher education that 'all students know that higher education study is about questioning, challenging, debating and creating knowledge as well as being about exploring and coming to know what is already known'. A further assumption in current definitions of 'engagement' is that the curriculum we offer will engage our students. According to Barnett and Coate (2004, p.148) a curriculum for engagement calls for a teaching that is likely to engage, to connect, to lift, to enthuse, even to inspire. A curriculum for engagement calls for a pedagogy for engagement.

There are two equally important aspects to the concept of engagement: how the student(s) experience(s) university and university level teaching and learning (which in itself is a multifaceted issue) and whether the curriculum offered is designed to 'engage' the students. Questions we may pose for ourselves to enable us as educators to create the conditions most conducive to engaging our students are:

- Do students understand the concept of 'engagement in the learning process'?
- Do academic staff assume that students understand 'engagement'?
- Do academic staff cultivate an engaging learning environment?

We can only answer such questions once we begin to ask them and to interrogate our responses. If we ourselves are vague as to what we mean by engagement within complex learning and teaching environments then we can't assume that our students understand what is expected of them at university level learning.

3. Understanding 'engagement' in the learning process

If university level study is to be a meaningful experience for our students, it is necessary for academic staff, administrators, policy makers and researchers to seek ways to better understand what factors and influences will lead to an institutional culture which promotes and encourages student engagement. We also need to consider institutional factors that might mitigate against engagement for some students, such as the social environment that is provided or promoted, the accessibility of administrative staff and procedures, the potential for cultural alienation and the hidden costs of university level education.

Many of these factors and other aspects of the student learning experience are now the subject of intensive research to enable universities to develop a culture of engagement. The most common means of 'measuring' engagement is to carry out surveys using questionnaires. One of these surveys is that carried out by the Australian Council for Educational Research (ACER) and universities in Australia and New Zealand. In 2008 twenty-nine institutions participated in the Australian Survey of Student Engagement (ACER 2009). The purpose of this survey and its outcomes is to stimulate evidence based dialogue about students' involvement in learning activities and the learning environment that empirical research has linked with high quality learning outcomes. The Student Engagement Questionnaire administered by ACER taps into six key facets of university learning, namely: active learning; academic challenge; student and staff interactions; enriching educational experiences; supportive learning environment and work integrated learning.

The outcomes of the 2008 survey make for interesting reading and give pointers to areas we should be concerned with if we are serious about student recruitment, attainment, retention and employability. For example a very high percentage of students surveyed indicated that they had never discussed ideas from course readings with teaching staff outside of class. Students value different types of interaction with staff but large classes and heavy workloads often mitigate against out of class interactions. Clearly universities need to respond to the issue of student/staff interactions in ways best suited to the type of institution and disciplinary culture.

The survey also highlighted that some disciplines offer a more challenging learning experience for students than do others. While this is not particularly surprising, faculty may want to consider what learning activities provide a suitable level of challenge for students. The survey showed that Humanities and Science subjects gained the lowest scores for active learning in contrast to subjects such as Architecture and Education for example. Students are perceptive enough to know if they can 'pick up' skills without any critical reflection required of them, or acquire knowledge without much understanding – but do they fully appreciate that this may not be in their best interests in a competitive employment environment?

Other key points picked up through the survey are that for a very significant percentage of students responding, Career Plans were never discussed with academic staff and many students did not have a positive experience of enculturation into the institution or the discipline.

Such surveys which are becoming more commonplace not only in Australasia but also in the UK and the USA provide a lens through which we can assess and respond to the challenge of providing a university level education that aligns with the needs of a turbulent world, engages our students in the learning process and prepares them for employability.

One of the most comprehensive studies of the first year student experience was carried out over a period of ten years across Australian universities, led by the University of Melbourne (Krause et al. 2005).

> … the first year of University study remains arguably the most critical time for engaging students with their learning community and equipping them with the requisite skills to not only persist but to be successful and independent in their learning throughout the undergraduate years and beyond. (Krause 2005, p.9)

While it is beyond the scope of this paper to interrogate all of the results from these surveys, some of the outcomes again give us cause for concern. A major issue for all students is coping with assessment of their learning and understanding what is expected of them. Receiving feedback on a first major piece of work to be assessed is a watershed experience for first year students. Students often express confusion over what is expected of them and what a good assignment looks like in any discipline.

In the 2004 Australian survey 34% of respondents reported that they had received lower marks or grades than they had expected (Krause et al. 2005). What this indicates is that over a third of the students in the survey are confronting the reality within their first year that they are not performing as well as they had expected. For some students this will be a jolt to their confidence and they may well adjust their study patterns to achieve the goals they set for themselves. For others however, the situation may be demoralizing and they require extensive, constructive feedback to raise their awareness of expected standards. Also, there is a responsibility on teaching staff to be clear and explicit about criteria and standards. We can point to research which shows that many students have different interpretations of assessment criteria than their lecturers and tutors (e.g.,Orsmond et al. 2000) which can have an adverse outcome for students.

All of this information points us in the direction of the curriculum and how we are designing, developing and delivering the curriculum. The next section explores some aspects of curriculum design for engagement.

4. Linking learning, engagement and the curriculum

> The single intervention by universities and colleges that would improve the quality of the student learning experience would be the enhancement of assessment practices. (QAAHE 2003, p.27)

Although it is well known that assessment drives the curriculum, it is still the case that our assessment practices are remarkably conservative. Assessment is designed by staff, implemented by staff and controlled by staff with very little opportunity for students to have any input (Boud 1995; Stefani 1999). We also still have a strong tendency to assess that which is easy to measure while the world of employment seeks graduates with a good grasp of complex learning skills (Yorke & Knight 2006).

There is a pressing need for faculty to interrogate again, the assessment tasks and processes by which we 'measure' student learning and take steps to design assessment for learning rather than merely 'of' learning. While most universities aspire to enabling students to develop key skills or graduate attributes, they have not necessarily developed a curriculum encompassing assessment strategies which explicitly reflect these attributes. For example, most lists of generic graduate attributes (Barrie 2004) would include the following:

- Critical and creative thinking
- Literacy skills
- Communication at different levels using a range of media
- Team learning, individual learning
- Leadership skills
- Inter-cultural competence
- Personal growth

However, these skills and attributes are often difficult to assess and require students themselves to reflect on and assess their strengths and weaknesses, with formative feedback being given at strategic times to enable students to improve or to further develop. They also require students to experience authentic learning tasks whereby the outcomes are not already known, and which encourage and allow students to construct new knowledge rather than regurgitate that which is already known, and authentic assessment which involves the students themselves in the assessment process (Elton & Johnston 2002). This may be the most significant challenge in designing and developing a curriculum for engagement.

It is not actually difficult to develop authentic learning tasks and assessment strategies but it requires commitment within an institution to reshaping the curriculum, to maintaining a clear focus on what we are trying to achieve and to taking risks in order to give our students a competitive edge in an increasingly competitive employment market. The main problem that many academic staff experience is sustainability of their endeavours to provide an engaging curriculum. The next section highlights three different authentic learning and assessment challenges for students and interrogates the factors that engaged the students in the learning process.

5. Engaging students in authentic learning

Giving students the opportunity to engage in authentic learning tasks often involves relinquishing control over the nature of the 'products' of learning and this in turn requires rethinking the assessment strategy. The following examples of authentic learning tasks encompass the graduate attributes outlined above, and the assessment strategies used necessitated a higher emphasis on the learning process than on the products.

The first example of an authentic learning task involved a large first year Biochemistry practical laboratory class. It had been the norm in this course to provide students with a booklet of tried and tested, but outdated practical experiments to be worked through on a weekly basis. Observing the students carrying out these practical classes, it was obvious that they held no real challenge, no critical thinking. They were a chore to be got through rather than an exciting learning challenge.

The major shift was that a staff team worked together to formulate real life problems that students would attempt to solve through research methods, critical and creative thinking, and team work. An example of the type of problem was the scenario that citrus plants had been devastated by a 'citrus blight' and the result would be a global shortage of citric acid. How could science research be brought to bear on alleviating this situation? There was not a 'known' solution to this problem. The students had to engage in scientific research, finding published papers, reading them carefully to determine potential ways forward, talk to academic staff – all very different from plodding through a recipe – which was what the practical classes had been reduced to over time.

The student teams worked on the authentic problem over a period of four weeks after having been inducted into the processes of team work and engaged in discussions with staff about the assessment strategy. Each team was allocated to a staff member they could turn to for support and formative feedback. The assessment strategy had a series of components. Firstly, the teams had to present their research as a poster which would be judged according to a clear set of criteria by staff and employers from the community with feedback given to support learning; the group work was assessed through self and peer assessment using a pro-forma worked out in partnership between staff and students, reflecting a high emphasis on group process. The group product, the poster – was assessed by staff. Thus a combination of peer, self and tutor assessment was put in place with a formula to ensure that there would be an individual mark arising from the project. This latter was of course to satisfy departmental regulations on assessment.

The student response to this new approach to practical laboratory classes was overwhelmingly positive. The employer contact was a new phenomenon for the students with the employers sponsoring prizes for the best poster. Staff within the School/Department saw this as an innovative approach and saw for themselves the student enthusiasm. However, the 'reward' for this work for the students was very small, comprising a tiny percentage of the overall individual mark for the Biochemistry course, but the personal growth was immeasurable.

For the staff involved, this innovative approach to learning and teaching won a national award, and several publications emanated from this work (Stefani & Tariq 1996; Stefani et al. 1997; Stefani 1999). Peer and self assessment strategies were new to most staff and there was

scepticism about students marking their own work and that of their peers. The exercise overall was seen as something that 'teaching enthusiasts' would do rather than an approach that could be built upon and used as a model in rethinking the curriculum to provide a challenging learning experience for students, requiring them to develop an understanding of the complexities of working as a team, bring to bear their individual skills and attributes, engage in critical and creative thinking, develop leadership skills. All of these attributes are expected of graduates entering into the workplace.

This authentic learning task predates the current rhetoric on student engagement – but the language of the time was to enable students to develop 'transferable skills' (EHE 1993), with a strong emphasis on enabling students 'to make objective judgments of their own and others' work' (Boud 1995, p.12). There is obviously a strong link between student engagement, transferable skills and the ability to objectively judge the quality of one's own and others work outputs. This particular project however was only sustainable as long as the 'enthusiasts' were present to drive it forward. It is notable in the learning task as presented, that the major anxiety that most academic staff had was losing control of assessment of student learning.

A second example of engaging students in authentic learning and assessment involves postgraduate environmental engineering students. In this class it had been the norm for students to carry out a substantial project as part of a Masters level programme within the discipline. While there had previously been attempts to encourage the postgraduate students to work in teams, this had not been particularly successful. On completion of their project, students were expected to present their 'research findings' to an audience of engineering employers and staff from the department. It was generally agreed that the quality of the presentations was poor and the Head of Department sought the advice and input of staff from the Academic Development Centre.

This provided an opportunity for academic developers and disciplinary based staff to work in partnership to enhance this aspect of the student experience. What ensued was a series of workshops for the students facilitated by an academic developer to enable them to understand what it meant to work as a team. The Head of Department was very keen to encourage the students to reflect on their learning and initially suggested that the students keep a Learning Journal but the student response made this a non-viable idea. Instead we jointly decided that the idea of encouraging reflection should be pursued but the form this should take needed to be more closely related to a 'real life' or authentic situation.

What transpired from this partnership approach to designing the postgraduate curriculum was the idea of a Project Management Logbook within which a record of the project process and progress could be kept. It was only a small step to take to transform this into an electronic Project Management Logbook.

The students received input on what it means to work as a team, input on project management and a demonstration on how to design and manage the electronic logbook. Prior to the students presenting their projects to the audience of employers, an academic developer worked with the students to enable them to enhance their presentation skills. All of this was a new approach for the student group. It had always been assumed that students understood how to work as part of a team and that because it was a postgraduate course the participants would already have developed presentation skills.

The assessment strategy in this case was different from that of the undergraduate case study described above. For the postgraduate substantive project it was a matter of pass/fail without any need for summative peer and self assessment. There were problems in some groups some of the time but the expectation was that at postgraduate level the students should be mature enough to manage conflict within their groups.

The outcome of this project was immensely important. After the presentations, the employers wanted to know more about the Project Management Logbooks and came to the department to view them. This diminished any scepticism the students had in engaging with this process. It informed them better than any lecturer or academic developer could that employers were interested in a range of skills and attributes, that team work was of great importance and that 'process' is as important as product. The following year presented few problems in encouraging a new group of students to design and maintain a Project Management Logbook as a major part of their group project.

This project had been driven by a partnership arrangement between academic staff and students within their discipline and staff from the academic development centre and had a higher chance of sustainability because the original idea had come from an enlightened and enthusiastic Head of Department (Stefani et al. 2000).

Again this curriculum innovation predates the 'engagement' agenda and was initiated at a time when employers were expressing a degree of dis-satisfaction at the poor team work skills of graduates entering into the workforce. However a range of skills and attributes over and above course or programme content can be tracked through this authentic learning task: leadership, creativity, negotiation within a group, project management, IT skills, presentation skills. The working process was as important as the engineering knowledge – and there was no summative marking or grading. The students learned through employer contact what is considered important in the world of work. This had a more profound impact than any form of summative assessment of key skills and attributes.

A third example of an authentic learning project is entitled *Poetry off the Page*. This project is a collaboration between an academic staff member in an English Studies department and an academic developer. The course is a third year undergraduate course. The basic premise of it is to bring poetry alive for the students. The class of students was inducted into a 'virtual learning community' emphasizing the high level of communications technology embedded into the course. The students would be encouraged to:

> … read, hear, talk, touch, record, perform, analyse, digitize, animate and otherwise engage with a wide range of poetic and critical texts, experiencing first hand the complex interactions of both material and digital artistic expression. (Sword & Leggott 2009)

In other words, students were being invited to engage with poetry in a very different way from the norm. The students were being encouraged to develop a capacity for critical, conceptual and reflective thinking, to show an intellectual openness and curiosity and a capacity for creativity and originality. This course endeavours to embed a range of graduate attributes contextualized to the nature of the discourse. The high level of active learning involved students in writing poems on pavements, critiquing each others work, expressing in different ways using different media, their understandings of classic poems and readings.

The assessment for this course involved an innovative range of learning tasks, the essence of which was that assessment in itself constituted an episode of learning (Stefani 2004). Students were expected to:

- Complete a web-page assignment based on poetry on the pavement, photographic accounts of the students themselves engaging in their learning with a reflective commentary.
- Transform a poem for the web, upload a draft version and invite peer critique of their own and other's work.
- Produce a sophisticated digital exhibition of five related objects from the university archives/special collections and again peer critique each other's work
- Complete a final examination in which they were asked to reflect on the entire course (thereby providing feedback for a future iteration of the course), draw connections between reading assignments, lectures, discussions, group projects, peer's web-pages and their own work.

A strong theme through the assessment is reflection on and affirmation of learning. The tutors don't know what to expect because creativity and critical thinking are at the forefront of this course. Students are constructing new knowledge as opposed to re-transmitting old knowledge. The class is dynamic, active and engaged!

There is again a strong chance of sustainability. The nature of this course is written up in the handbooks. Students remark on it being challenging – but enjoyable and worthwhile. The students have much more control over their own learning and the assessment strategy embraces personal growth as well as understandings of the meaning of textual materials.

This project, not surprisingly won a Teaching Excellence Award and is an excellent model of how things could be if we as academic staff would re-evaluate our models and frameworks for curriculum design, ask ourselves again what it is we are trying to achieve and also allow ourselves to let go of the reins of assessment and put more trust in our students to become involved in the assessment of their own learning. It is quite obvious that not all of the knowledge, skills and understandings developed through this course can be explicitly assessed but the academic staff involved will testify to the enhanced levels of engagement, the active participation and the lack of opportunity to *not* learn in this course.

These examples of authentic learning opportunities designed to engage students in learning were all developed by teams of staff working together to provide a stimulating and challenging learning experience for large groups of students. This shows that it can be done. Through the educational literature there are many examples of such innovations but the picture obtained is one of a patchwork quilt – patches of bright colour surrounded by a larger plain boundary, signifying tradition in teaching and in assessment.

However, the key point is sustainability. How sustainable are these innovations and initiatives if there are staff changes? The world of academia has not collapsed because of innovative learning opportunities and authentic assessment. The questions this raises are: Why are we as academic staff so reluctant to promote sustainable changes to the curriculum? Why are senior management teams in universities not paying heed to the changing expectations of students, employers and society in general and promoting such systematic change 'from the

top'? It is also reasonable to return to the question posed at the beginning of this paper : What is the powerful pedagogical idea underpinning such authentic learning and assessment that can be used as the driver for sustainable curriculum and institutional change? (Nicol & Owen 2009)

6. In Summary

Student engagement, while currently a hot topic in Higher Education is a complex and multifaceted concept. It is unsurprising that it has become an important research topic given the pressures on universities to recruit and retain students and enable them to attain the best possible outcomes. If we are not engaging our students through authentic and challenging learning tasks, we are in fact letting them down and we are probably letting major employers down too, if graduates lack the sorts of graduate attributes that are now expected from a university level education.

Unquestionably universities have had to change quite dramatically over the past two decades or so but the last thing to undergo radical change is the curriculum – how we design, develop and deliver it. We have a very strong tendency to hold on to as much of the 'old pedagogies' more suited to an elite higher education system than to a 21st Century mass higher education system. A key issue we are particularly resistant to changing is that of assessment of student learning.

The examples of engaging learning tasks presented in this paper show that we can devise authentic learning tasks with authentic assessment strategies but as with most other examples of innovation to engage our students, they are only sustainable as long as the staff driving the innovations are there to keep it all going, when what is really required is a systematic overhaul of the curriculum promoted and supported by senior management.

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