Student Engagement and Assessment: The First Year Experience

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STUDENT ENGAGEMENT AND ASSESSMENT: THE FIRST YEAR EXPERIENCE

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ABSTRACT

Student engagement in the first year of university has received considerable attention by higher education researchers and policymakers internationally (Krause et al 2005; Nicol 2009). UCD's current Strategic Plan to 2014 has prioritised fostering early and lasting student engagement (UCD 2010).   Arising from the plan, the University's 'Focus on First Year' strategic project was initiated and an important part of this initiative included a focus on assessment in the First Year (UCD Teaching and Learning, 2011). The main objectives of this activity were to evaluate how first year assessment practices were supporting student engagement and to make recommendations for enhancement. In order to design an institutional framework to enhance assessment in the First Year, theoretical data and evidence of current institutional practice were gathered and critically evaluated. Four specific methodologies were used: a comprehensive literature review; institutional data analysis of First Year assessment; case-studies of institutional practice and expert practitioner advice. These methodologies integrated evidence from both theory and practice.

Based on this evaluation it became evident that a design framework would need to incorporate a dual focus to address the design and operational issues at module level whilst also providing a more strategic design perspective from the vantage point of a School or Programme. Nine design principles emerged: six module and three strategic design principles. These principles were supplemented by an extensive suite of expert resources, openly accessible, to assist academic staff planning changes to first year assessment (O'Neill & Noonan 2011a, 2011b; O'Neill, Noonan & Galvin 2011). The framework (nine design principles and resources) was then used to direct enhancement of First Year Assessment redesign in a new implementation phase of the project (UCD Teaching and Learning, 2012). The dual focus of the framework provided an holistic lens with which to examine and identify directions for enhancement of first year assessment practices both locally and internationally.

Introduction

Student engagement in the first year of university has received considerable attention by higher education researchers and policymakers internationally (Krause et al , 2005; Kift et al 2009; Nicol 2009). This is perhaps not surprising since participation rates in higher education have been increasing over the last 20 years as a consequence of government

policies to produce educated graduates to meet economic workforce requirements. Universities have responded positively by incorporating additional student numbers, developing a wider array of programme offerings and in many cases implementing more flexible curricular structures .

Student success in the first year, in terms of transition into higher education and subsequent progression at undergraduate level remains an area of international policy and research interest. Reasons for this interest include:

- Completion rates for students,
- The implications of on-going diversification of the student profile and access to higher education,
- The responsiveness of higher education institutions in meeting learner requirements,
- Student engagement and success particularly in the First Year.

More recently in the Irish context, The Hunt Report (2011) has emphasised the necessity of ensuring the appropriateness of the structure and underlying pedagogy of the first year of higher education as a foundation for success in higher education. This recommendation highlights a need to bridge the experience between the second level experience and the experience of learning in higher education.

In addition over the last ten years, the impact of the Bologna Accord has shaped curricular structures and promoted the development of credit-based, learning-outcomes focussed curricula. The increasing flexibility of curricula and programmes presents challenges in terms of integration and coordination of the learning experience for students. It could be argued that the more flexible higher education learning experience in some ways exacerbates the difference between second level and university level learning, not only in the academic demands but also through the demands for learners in navigating the curricular structures.

It has long been held that assessment has a critical role in moulding student learning behaviours, and much of Boud's (1995) work focuses on this issue, and he is well known for his concept of 'assessment for learning'. This approach highlights assessment as an

important aspect of curriculum design which should both support, and promote, learning as well as certify its achievement. However Boud (1995, p35) also states categorically that "*..the effects of bad [assessment] practice are far more potent than they are for any aspect of teaching. Students can, with difficulty, escape from the effects of poor teaching, they cannot (by definition if they want to graduate) escape the effects of poor assessment*".

Taken together, the question of student engagement (Krause et al 2005); the design of flexible programmes (Linn 2000; Fink 2003) and the design of assessment (Nicol & MacFarlane-Dick 2006), this paper presents a case-study of practice at University College Dublin which addressed current practices of assessment in the first year at the University. It presents how a more coherent assessment design framework was developed to better support student learning and transition in the first year at University. This paper will set out the strategic context in which this work was initiated, it will describe the methodology and the key findings from each strand of activity, it will address assessment and programme structures and it will present how these factors influenced the assessment design framework which emerged from the work.

The Strategic Context: Curriculum Change and Consolidation

In 2005, UCD in line with its Strategic Plan 2005-2008, implemented a fully modular, semesterised, credit-accumulation based curriculum called "Horizons". This new curriculum was fully aligned to the Bologna three programme cycle at undergraduate, graduate and doctoral level and was described using learning outcomes. Implementation of semesterisation and the modular structure was based on the principle of modules as the basic building block of the curriculum and the University Regulations defined a module as:

"*..a coherent and self-contained unit of learning, teaching and assessment, which comprises a defined volume of learning activity, expressed in terms of learning outcomes, which are in turn linked to assessment tasks. The volume of educational activity is expressed in hours of student effort and which is linked directly to the credit value of the module*" (UCD Academic Regulations, 2011, p.1.1).

A standard module size of five European Credit Transfer System (ECTS) credits was adopted, and all modules were to be delivered and assessed within the semester. Each semester comprised six modules, giving an annual full-time student workload of 60 ECTS credits per academic year. There are two major points of significance to this structural change. Firstly the concept of the module as a self-contained unit of learning constructively aligned with the associated assessment tasks was designed to provide curricular flexibility and thus modules could be core to more than one programme. Additionally through the provision of student free choice of two modules per year as electives (ten credits), the policy that all modules should have a number of elective places available meant that students from a wide and diverse range of programmes could take the same module. In summary, this flexibility heralded an opening up of programmes and created learning opportunities for students across disciplines other than their core programme. In this regard a new relationship in curriculum design terms was established between the module as the basic building block and the programme as a more student negotiated pathway of learning.

Secondly, the University implemented a change in its assessment policy in the new modular curricular format. Where previously year-long courses had been assessed at the end of the academic year through a traditional diet of examinations, the impact of semesterisation meant that there were two points of assessment: at the end of semester one and the end of semester two. As part of the curricular re-design process, the University issued a policy statement which required that examinations should not be the sole means of assessment for a module. The rationale for this policy was to ensure that students' received interim feedback through assessment on their progress in a module, that the weighting of assessments moved away from 100% summative assessment and that students were exposed to more modalities of assessment which were in turn aligned to the specified learning outcomes. In summary the University's curriculum change process led in to an increase in the number of curricular units (modules); a reduction in their size and an increase in the volume and frequency of assessment.

Following the successful implementation of a fully modular curriculum, the next phase of the University's strategic development identified a process of curricular consolidation as a key priority. Within the 2009-2014 University Strategy, 'Forming Global Minds', these goals were expressed in terms of the articulation of desired graduate

attributes and concurrently a focus on enhancing the nature and structure of the Horizons curriculum:

"*Further develop the UCD Horizons undergraduate curriculum, strengthening programmes, fostering student engagement and fully exploiting the flexibility of the modular curriculum*" (UCD 2010, p5).

In the context of student engagement, the transition period in First Year was identified as the first strategic priority, and in relation to this objective, assessment and engagement were specifically highlighted:

"*A review and reform of the structure, outcomes, assessment and remediation strategies for first year, and in particular the first semester, to support the transition from 2nd- to 3rd-level and to adapt to the different needs of different students*" (UCD 2010, p 16).

As part of a wider project on 'Focus on First Year', under the leadership of Professor Bairbre Redmond, a subgroup was set up to consider the implementation of these goals for curricular consolidation and enhancement, i.e the "*First Year Assessment Project 2011-2012*" (UCD Teaching and Learning 2011). This project laid the foundations for further phased implementation of a new UCD strategic project entitled '*Assessment ReDesign Project, 2012-2014*' (see UCD Teaching and Learning 2012). This paper particularly focuses on outcomes of the first phase, - the '*First Year Assessment Project 2011-2012'* (UCD Teaching and Learning 2011).

First Year Assessment Review

The review of first year assessment commenced in November 2010, with the establishment of a project group comprising a representative group of: Vice-Principals for Teaching and Learning; Programme Deans; Teaching Fellows; Administrative Directors; and staff from UCD Teaching and Learning. At the outset, the group undertook a brain-storming exercise to identify on the key components/principles of the first year learning experience. This exercise allowed the identification of known issues including engagement, over-assessment and the pace of student learning and it also identified some desired attributes of the first

year learning experience. From that exercise four streams of work (data collection methodologies) were identified and these proceeded concurrently (See Figure 1). These were:

1. A review of Institutional Data Analysis of Assessment;
2. A comprehensive review of literature on 1st Year Assessment;
3. A survey and collation of case-studies of practice, both UCD and internationally;
4. Consultation with an international expert on student engagement and feedback, i.e. Professor David Nicol.
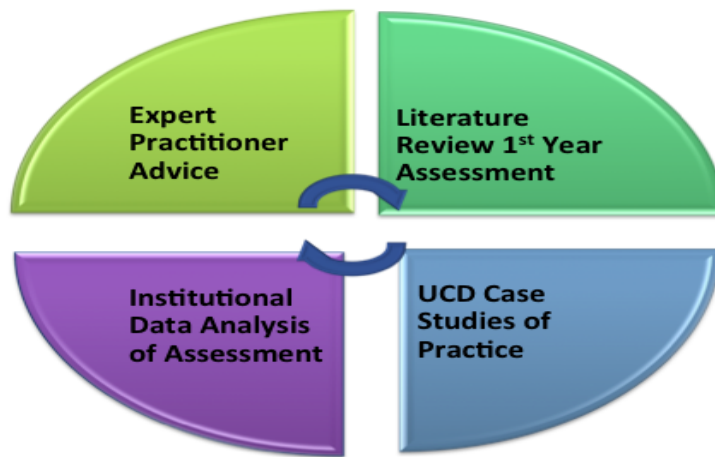
Figure 1: the Four Data Collection Methodologies

1. Institutional Data Analysis of Assessment

Data from the institutional First Year module descriptor assessment practices were gathered and interrogated to provide a picture of the volume, type and frequency of assessment activities. All first year modules (n=390) for the academic year 2010/2011 were included within the data set. The data were analysed by programme and by school and for the first time the University had a picture of its assessment practices from the perspective of the student learning experience.   Whilst there had been anecdotal recognition that assessment may have increased under modularisation, the data confirmed this to be the case. High- level trends and issues to have emerged from the data included:

- Over 53% of modules had three or more assessments with an average loading of 2.8 assessments per module. The cumulative effect for students and staff on some programmes was upwards of 16 assessments per semester;

- Assessment loads varied between semester 1 and semester 2, with the assessment load in semester 1 appearing higher in some instances;

- There were discernible peaks of assessment activity: in weeks 7 & 8; 11 & 12; and 14-15;

- Almost 1/3 of First Year assessment was by means of end of semester exams, but if Multiple Choice Questions (MCQs) and class tests are included, the proportion of assessment which is conducted under test conditions rises to almost 46%;

- A proportion of modules were also using attendance as a form of assessment 18.5%.

The data (see Figure 2) confirmed a high volume of assessment in terms of student workload and when reviewed at programme level it became apparent that some students undertook in excess of 35 assessments per academic year. This figure indicated the potential over-assessment which was taking place and could pose issues for student engagement in terms of attendance and learning behaviours. The other interesting trend was the timing of assessments which indicated that from a student perspective there were discernible peaks of activity at certain times in the semester (see Figure 2).
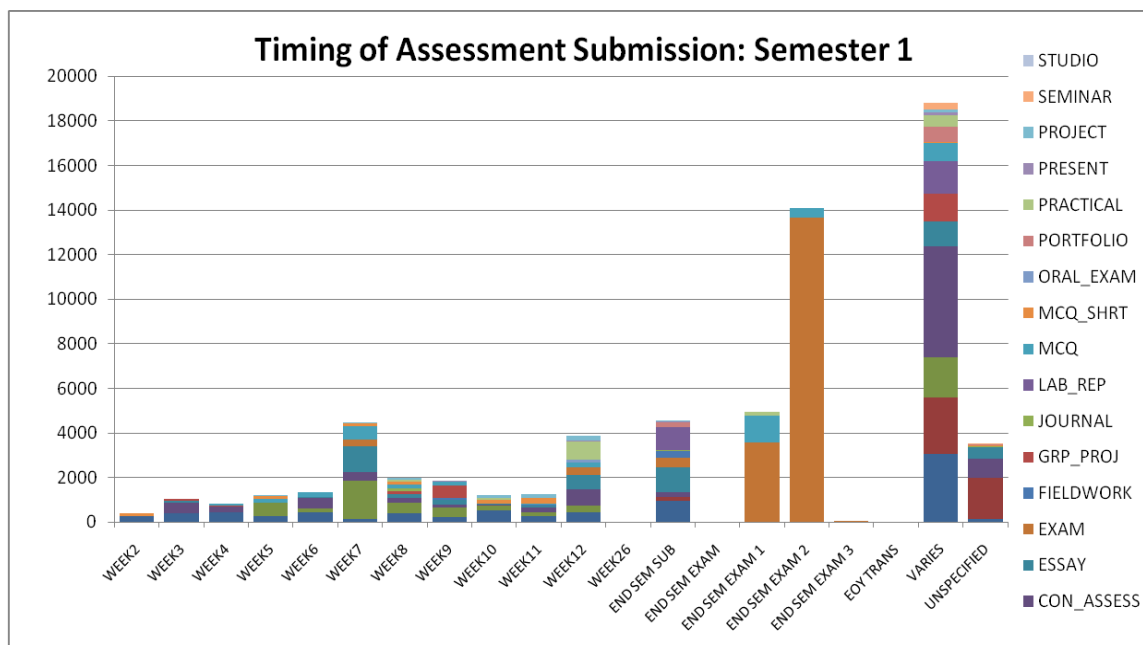
Figure 2: The Type and Timing of all UCD First Year, 1st Semester Assessments

Additionally, the reliance on examinations in weeks 14/15 could be interpreted to have consequences for the amount of time, and hence the pace of content being covered by students, which was effectively compressed into 12 weeks, with week 13 for revision. Interestingly the use of attendance and participation as a form of assessment was suggestive of efforts by staff to address perceived student engagement issues.

2. Review of Assessment Literature

A comprehensive literature review was under-taken drawing on the most contemporary international research on assessment and in particular assessment in the first year. Taking account of Krause et al's (2005) longitudinal study of First Year Engagement in Australian Universities, which typified the 'risk' factors for student success, the literature review sought to identify practical examples or instances for addressing these through assessment practice. The literature review was also informed by the spirit of Chickering and Gamson's (2011) educational principles which emphasise the importance of clarifying learning expectations for students and setting a challenging learning experience with well-designed assessment to enhance student learning and engagement. Some themes that emerged from the review were:

- The need to support transition to University level learning (Gibney et al 2010; Taylor 2008);
- Develop student autonomy for learning through collaborative and social learning and assessment (Huba & Freed 2000; Nicol 2010; Oakley et al 2003) ;
- Provide timely and useful feedback to students on their progress (Salder 2010; Kift et al 2009; REAP 2010);
- Design of the efficient use of student workload including time within the class-room and independent learning activities and staff correction time (QAAHE 2010; Hornby 2003; Ross 2010);
- Regaining a more strategic approach to assessment design (PASS 2011; Mutch 2002; Knight 2000);
- Consideration for developing more space in first year curriculum to allow for enagagement with content (Land 2007; Land et al 2005; Dirkx & Prenger 1997).

3. UCD Case Studies of Practice

An exploration of practices in assessment and learning design to promote student engagement and success was also undertaken. This work built on that of the UCD Fellows in Teaching and Academic Development (Gibney et al 2010) which had examined the expectations and experiences of first year students at UCD. The original study had indicated two important findings:

- Discernible difference in students' confidence in their abilities and potential to be successful;
- A mis-match between the amount of time students believed they needed to devote to learning (28 hours/week) in comparison to the expected amount of learning time (40/hours per week).

The review of practices nationally and internationally started from this point to identify approaches which would engage students actively in learning and where assessment and learning design were closely aligned to achieve this end. International examples were identified through published case studies of good practice (REAP 2010; PASS 2011) and the evaluation of these case studies focussed on identifying:

- The key components of the practice;
- Evidence of the evaluation of its success;
- The degree of transferability of the practice to UCD.

In addition a number of internal UCD case-studies of known innovative and successful approaches to First Year learning and assessment were also collated and disseminated (O'Neill, Noonan, & Galvin 2011)

4. Expert Practitioner Advice

The group also commissioned an input from an international expert, Professor David Nicol, whose work on student engagement and feedback had come to prominence through an assessment project conducted across all universities in the Glasgow region. The central thesis of Nicol's work (2007; 2009; 2010) was that engagement and empowerment are closely inter-linked and necessary qualities for student success particularly in the early stages of programmes.

His work proposed that the development of students' self-monitoring skill, which allows them to understand how they are performing, is critical to student success and has implications for both assessment design and the availability and frequency of assessment feedback. In particular, his work promoted a wider interpretation of feedback as being dialogical between learner and teacher, rather than being teacher-centric (Nicol 2010). In practice he advocated developing students' self-regulating abilities through peer review of assessment and learning activities in class. Getting students to work with assessment criteria with a view to understanding what levels of performance are necessary for success he argued, would allow them to become better autonomous and more empowered learners. He also advocated a wide repertoire of feedback approaches which extended beyond formal written feedback on assessment tasks and involved group feedback, exemplar work, technology mediated assessment (Nicol & Milligan 2006) and in-class feedback on student learning through the use of the '1 Minute Paper' (see example, O'Neill & Noonon 2011a, p19). This is a technique which quickly enables a lecturer to get a gauge of those concepts students have understood or not within class, and allows gaps in understanding to be addressed in the next class. Overall Nicol's work emphasised the notion of feedback and

student self-regulation skills as an on-going learning process, inextricably linked with the design and delivery of curricula.

Synthesis into the Nine Assessment Design Principles.

The vast array of data gathered by the group had provided information on:

- UCD assessment practices;
- Directions for developing assessment from the literature;
- Practical examples of successful initiatives undertaken elsewhere in HE;
- The potential for re-framing assessment and feedback to promote better learning.

From the outset, the group had been keen to explore the theory and practice of assessment to inform the recommendations about how First Year assessment at UCD might be enhanced. It believed that changing assessment practice from the picture presented by the student assessment data, had to be approached from a learning design perspective rather than a focus on technical adjustment of the number and form of assessments .

The analysis of the data had indicated a separation between module and programme, where assessment design and implementation was localised at module level away from the programme. Based on the richness of the data gathered and the theme of accelerated content coverage within the semester which had emerged from the group's initial brain-storming, it was decided that the principle of '**deliberative design'** might provide a useful organising concept to isolate some key lessons from the data set. Working with this concept, it became evident that what would be required was a solution which addressed assessment as a learning design issue at both module and programme level. Consequently a set of nine principles: six module design principles and three programme design principles were developed as follows (Table 1):

The Six Module Design Principles (O'Neill & Noonan, 2011b)
1. Allow students, where possible, have opportunity for regular, low stakes assessment with opportunity for feedback on their progress
2.   Develop students' opportunities for in-class self and/or peer review of their learning against assessment criteria
3.   Allow students multiple opportunities for well-structured and supported collaborative learning and its assessment (peer and group-work, project work)
4. Consider the redesign of the learning sequence of module learning activities in an efficient and effective manner, including the related blended learning opportunities
5. Introduce more active/task-based learning which uses more authentic assessments (i.e.subject/discipline identity)
6. Consider the student work-load demands within the module, as well as in parallel modules.

The Three Strategic Design Principles (O'Neill & Noonan, 2011a)
7. Design space into the curriculum for more engagement in the discipline/subject
8. Develop a coherent approach to use of assessment, i.e. mapping assessments to 'core' learning outcomes for the stage
9. Implement a range of approaches to streamline assessment .

Table 1: The UCD Module and Strategic Assessment Design Principle for First Year.

The 1st Year Assessment Design Principles were published as a set of resources for academic staff, with each design principle fully elaborated with the underpinning theoretical literature which had informed it. The principles were in turn supplemented with a rich body of resources based on international good practice, and a separate resource of UCD case-studies (O'Neill, Noonan & Galvin 2011) which described changes implemented in the design and assessment of first year modules. The 1st Year Assessment Design Principles and associated resources were published on the UCD Teaching and Learning website, an executive summary of the assessment data findings along with the Design Principles was circulated to Programme Deans and Heads of School to inform programme planning and module updates for academic year 2011/2012, see also http://www.ucd.ie/teaching/resources/assessment/focusonfirstyear/

Some Lessons Learned and Future Directions

The impact of curricular flexibility.

Modular curricular structures have often been criticised in terms of their flexibility for fragmenting the curriculum structure and the student learning experience into smaller units. Some have described the shift in the design emphasis away from the programme to the module as a weakening of the coherence of the student learning experience (Knight 2000). Whilst traditionally the programme as a learning unit provided the necessary coherence in terms of teaching, learning and assessment, the onus for creating this coherence is now placed on the student who needs to negotiate their pathway through a sequence of modules. It was clear from our work that this phenomenon needs to be managed in a deliberate way through effective assessment and learning design. The advantages of modularisation in terms of curricular clarity and learning outcomes presents a challenge. This is in particular in terms of moving from an over-emphasis on content coverage and teaching, to designing for an effective student learning experience with content as an enabler to help students acquire key academic principles as well as learning attributes and skills. Careful and thoughtful assessment design which supports learning as well as certification is critical.

Developing students' learning capacity.

The importance of developing students' learning capacity so that they can be autonomous, self-regulating individuals is an important graduate attribute to which many would subscribe. Many educators would probably agree that the world into which graduates enter on completion of their university education requires them to be learners for life with the capacity to synthesise information effectively (Clark & Linn 2003) and to discriminate between competing arguments and information sources competently. In this context, developing capacities for these higher order learning skills based on core disciplinary knowledge is important. Boud and Falchikov (2007) argue for the development of schemes of assessment tasks that progressively promote the development of students' abilities to make increasingly sophisticated judgements about their own learning. Such approaches to

assessment place assessment as a crucial element in developing students' capacity to learn for the longer term. The argument and practice advice for adjusting assessment and feedback activities within the educational setting to develop this capacity for self-regulation of learning, as espoused by Nicol (2007), is quite powerful in this regard.

Evidence-based evaluation of practice.

This project demonstrated, perhaps not surprisingly the importance of using an evidence-based approach to set a new direction for changing practice. As well as understanding and illustrating current assessment practices at UCD, the search for solutions focussed on bringing together directions suggested by assessment literature and validated examples of practice change elsewhere. The largest challenge was to evaluate these and relate them concisely and effectively to the particular curricular structures in operation within the University. In this regard, the articulation of new assessment design principles based on evidence of their effectiveness allowed the development of a framework which integrated both theory and known good practice.

Future directions.

Following publication of the 1st Year Assessment Design principles a number of directions to focus on-going implementation have been identified, these are:

- Development of programme approach to assessment strategies in a new Assessment ReDesign project (2012-2014)

    As a result of programme planning activities carried out in academic session 2010/2011 a number of programmes (n=5) had prioritised a review and development of their assessment approaches. Consistent with the strategic and module assessment design principles, work is being undertaken initially with these five programmes to develop an holistic and strategic perspective on the range and kind of assessment in operation (See UCD Teaching and Learning 2012). This project will be rolled out further over the next two-three years in UCD as a strategic priority.

- Alignment between policy, curriculum documents and design principles

    This will involve a review of the module descriptor document and in particular developments to hyper-link fields within the descriptor to the assessment design principles.

- Learner-centred model of feedback

    Using the principles of developing students' self-regulating capacities, the concept of a more dialogical approach to feedback will be promoted (see also podcast resource, O'Neill 2011).

- Approaches to large group assessment

    In an era of mass higher education, with increasing class size, examining solutions to large-group assessment is an important and complex issue. Work will be undertaken to look for innovative solutions in this regard which maintain the quality and standards of assessment and feedback without increasing staff effort.

In summary, UCD set out to make an evidence-based approach to changes in its 1st year assessment. This paper sets out how this was implemented and achieved, resulting in the production of a set of nine assessment design principles. UCD is now in the next phase of the project's implementation and these principles are informing a new *Assessment ReDesign project* 2012-*2014.* This phase takes a programme approach to assessment, with continued emphasis on change in first year. Five programmes are working through this in 2012 and further programmes will be involved over the next 2-3 years. Further dissemination of this phase of project will be completed as it is implemented and evaluated. This phase may well support the validation or refinement of the nine assessment principles. Only time will tell.

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