Roadworks on the learning highway: the UK experience of assessment.

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1.0 Introduction

This paper is based on the view that good assessment promotes good learning, and the two should run smoothly in parallel as a 'two-lane learning highway'. This view is based on and illustrated by an examination of theory relating to; why, what and how assessment is conducted in UK Higher Education.

However the practice of assessment and students learning in the UK is subject to many obstructions which act as roadworks on this learning highway. This paper concludes with a diagrammatic representation of these obstructions, illustrating practical factors which should be considered in order to make optimal use of the theory.

2.0 Assessment and learning

Assessment is an integral and essential element in the higher education process. There is an onus on academics to ensure that, if assessment is to take place, the most appropriate methods of assessment are employed.

Student's education will have been driven by assessment and the outcomes of that assessment process will have determined that student's university career. The expectation of students embarking on a higher education course is that the process of assessment-led education will continue. This mindset ultimately affects teaching and learning methods in higher education and, perhaps obviously, the assessment of student learning in higher education.

Higher education is about letting students take responsibility for their own learning by encouraging student-centred learning. Good assessment practice requires considerable thought, preparation and execution on the part of the academic. In today's climate of diminishing resources, the administrative demands made of academics and the requirements for achievement

in the latest Research Assessment Exercise, a juggling of priorities is required of both the individual academic and of the institution. Assessment has to be effective and efficient and these two elements should be balanced. However, *if* assessment is viewed as a low priority, or low-status, activity, the weighting may move towards efficiency to the detriment of effectiveness. We need always to be careful that assessment does what it is supposed to do.

3.0 Why assess student learning.

Assessment is a domineering facet of Higher Education today. Our learning lives from primary school onwards, are focused on assessment. During this period our learning is assessed formally at approximately 3 monthly intervals. Assessment is something to which we have become accustomed during our formal learning lives. Blenkin and Kelly (1992), introduce the book 'Assessment in Early Childhood Education' by stating:

> 'Assessment is an essential element in the educational process. It is essential because it is an integral part of that process. We progress educationally by acquiring a facility for assessing our own learning achievements and thus our own learning needs. The rôle of the teacher in this process is to assist in the acquisition of that facility.'

There is a fundamental question of whether we need to assess student learning at all in higher education. We have developed a culture of assessing learning at all levels of education but the reasons for doing so are not always clear. If higher education is concerned with the acquisition and advancement of knowledge, then there should be clear evidence that the processes and methods used for the assessment of student learning and the outcomes of that assessment play a key role in this concern. Heywood (2000, P9) informs us that "during the last 15 years, there has been an enormous increase in interest in 'assessment' in higher education". Heywood explains that the term assessment in this instance applies to the assessment of institutions, programmes and teaching as well as to the assessment of student learning.

For example, with the establishment of the Quality Assurance Agency and the focus of the funding agencies on the 'quality assessment' in higher education in the early 1990's, higher education institutions have been attempting to interpret 'best practice' in assessment in an attempt to achieve high scores in the Teaching Quality Assessment and, latterly, Subject Review exercises. These exercises correspond to quality assurance inspections in industry and commerce in that they concentrate on processes with little attention to the product. As a result, institutions have been making strenuous efforts to attempt to get their written policies and procedures sorted out and arranged to ensure that a quality inspection will find that there is a logical association between government policy, institutional policy and the policy of faculties, departments, programmes and modules. The paperwork needs to be in order, there needs to be written evidence to support stated practice and all loops must be closed.

The Quality Assurance Agency for Higher Education in its Code of Practice for the assessment of students (QAA 2000) states that assessment serves many purposes and that assessment:

- Provides the basis for decisions on whether a student is ready to proceed, to qualify for an award or to demonstrate competence to practice.

- It enables students to obtain feedback on their learning and helps them to improve their performance.
- It enables staff to evaluate the effectiveness of their teaching.

Mutch and Brown (2001), writing for the LTSN Generic Centre, agree with these set of purposes but expand them further under three categories of purposes of assessment of student learning, viz.: learning; certification and quality assurance. They expand on each of these as follows:

Learning

To provide feedback to students to improve their learning
To motivate students
To diagnose a student's strengths and weaknesses
To help students to develop their skills of self-assessment
To provide a profile of what a student has learnt

Certification

To pass or fail a student
To grade or rank a student
To licence to proceed
To licence to practice
To select for future courses
To predict success in future courses
To select for future employment
To predict success in employment

Quality Assurance

To provide feedback to lecturers on student learning
To improve teaching
To evaluate a course's strengths and weaknesses
To assess the extent to which a programme has achieved its aims
To judge the effectiveness of the learning environment
To ensure the course is credit worthy to other institutions and employers
To monitor standards over time

There is a consensus amongst educational researchers that assessment has many purposes. It is perhaps the prioritisation of purpose that impacts on the assessment process. Biggs (1999 p160) summarises it succinctly when he says:

> 'There are two paramount reasons why we should assess: formative, to provide feedback during learning; and summative, to provide an index of how successfully the student has learned when the teaching is completed.'

Brown *et al* (1997, p9) take a similar approach and determine that assessment 'provides estimates of a person's *current* status'. They delineate assessment as either 'developmental assessment' or 'judgmental assessment'. Developmental assessment is defined as 'concerned with improving student learning and is founded on trust between individuals and in the system of assessment'. They define judgmental assessment as 'concerned with licences to proceed to the next stage'.

In order to design appropriate assessment, it is critical that the purpose of the assessment is clear and that that purpose has sole priority otherwise the utility, reliability and validity of the assessment will be reduced. The assessment of student learning should have student learning as its priority.

The rationale for assessment and the purposes and rôles of assessment will influence the approach to assessment taken by academics. These factors will influence and guide the curriculum and the pedagogy and will particularly dictate the practice and methods of assessment and it is therefore essential that there is clarity in the rationale for assessment and transparency of purposes and rôles of assessment.

4.0 What ought to be assessed?

UK Higher Education curricula are currently directed towards learning outcomes which are expressed as

- Knowledge and understanding
- Intellectual skills
- Transferable skills

Knowledge is the key facet of Higher Education, however it is something which is difficult to define and therefore something which is difficult to assess.

For example, Eraut (1994) distinguishes knowledge in two domains:

1) Formal learning, which includes any one of the following characteristics:

   - A prescribed learning framework
   - An organised learning event or package
   - The presence of a designated teacher or trainer
   - The award of a qualification or credit
   - The external specification of outcomes, and,

2) Non-formal learning which he analyses across two dimensions

   1. Intention to learn, which is a continuum with *deliberative learning* at one end and *implicit learning* at the other with *reactive learning* occurring somewhere between the two.
   2. Timing of the events providing the focus for the learning, i.e. past, present or future.

Formal learning and explicit knowledge are relatively straightforward concepts to appreciate and are readily assessable. It should be recognised that non-formal learning and tacit knowledge have

a place in higher education and should be considered in the assessment. Eraut (2000) reports that non-formal learning and tacit knowledge have acquired a wide range of meanings and explains that (p119) 'the problem for researchers is to reach as far as they can down the continuum from explicit to tacit knowledge'. This could make difficult the articulation of assessment criteria for such knowledge and learning.

Knowledge, therefore, can take many forms and can be defined in many ways. Knowledge and learning go hand-in-hand. Assessment of student learning should consider what knowledge is to be brought to bear on the assessment task. Should the assessment be restricted to formal learning of propositional knowledge defined by the curriculum or should it be designed to be more flexible to encourage manifestation and application of the individual student's personal knowledge?

If student learning is to be assessed, there must be clarity as to what constitutes student learning and what knowledge is to be learned. The higher education curriculum is now more reflective of employers' wants and requirements, and learning as preparation for the workplace is an integral part of the higher education process. Teaching, Learning and Assessment strategies should recognise different types of knowledge and if students are to be prepared for the workplace, assessment methods should be designed to assess the complete package of student learning, and not just the declarative knowledge base. Learning in Higher Education is more than an accumulation of declarative knowledge. Rather it is the integration of knowledge with skills, abilities and experiences and the ability to apply this package of learning.

5.0 How should assessment be carried out?

The Quality Assurance Agency for Higher Education published a Code of Practice for the assurance of academic quality and standards in higher education (QAA 2000). Section 6 sets out principles and precepts for the assessment of students. General Principle 1 advises that 'institutions will wish to ensure that … assessment policies and practices are responsive and provide for the effective monitoring of the validity, equity and reliability of assessment'. General Principle 2 states: 'The principles, procedures and processes of all assessment should be explicit, valid and reliable'. It is in this context that academics should approach assessment.

Assessment may be metric, judgemental or descriptive, or a combination of more than one of these. Assessment may also be 'norm-referenced' or 'criterion-referenced'. Norm- (short for normative) referenced assessment measures (or gauges?) learner performance against the standard of the group rather than against a pre-determined standard. Criterion-referenced assessment measures a student's performance against an explicit, previously determined standard.

Norm referencing relies on fixing a level as the norm against which the students' marks are compared. The norm is taken from the range of marks of that group. Student marks in the norm-referenced assessment will fall above or below this norm and on this basis, students are compared. Brown *et al* (1997, p11) describe a norm referenced task as one 'which yields a rank order of candidates based on a distribution of scores'. Norm-referenced assessment is particularly useful for selection purposes as it distinguishes the students who perform better in the test from the others in the group. However, there are two major drawbacks associated with norm-referenced assessment. The first is that because the norm is dictated by the marks of that

particular group, the standard is set by the particular group and not by any universal norm. The second drawback is that the results of norm-referenced assessment are usually uninformative because there is no descriptive detail about what a student can or cannot do. Summative assessment often relies on norm-referenced assessment methods.

Criterion-referenced assessment is formative in nature because it is designed 'to check that a student has obtained mastery in an area of knowledge or skill' (Heywood 2000, p397). It should improve motivation because all students have an equal opportunity to achieve top marks or grade and it benefits the student, the teacher, employers and the institution. Knight 2000 (p243) explains this:

> 'Ostensibly clear and generally-available statements of the criteria for a given (level of) award should tell learners what they have to do to succeed: help academic staff to apply consistent standards to their grading; and inform employers and other stakeholders about achievements that a HEI is prepared to warrant'.

However, criterion-referenced assessment is also not without its drawbacks. Knight (2000) lists six problems with criterion-referenced assessment: the difficulties associated with developing the criteria; communicating the criteria; reaching shared understanding of the criteria; validity versus reliability; attempts to assess personal qualities; and the 'bloating' of academic transcripts. Criterion-referenced assessments are resource intensive and relatively expensive.

'Traditional' assessment methods in higher education come under the banners of 'coursework' and 'examinations'. Coursework implies, but is not necessarily, continuous assessment during the module which is of formative value. Examinations imply terminal assessment which is of summative value. In practice, the terms are not so distinctive; e.g. coursework could consist of several examinations during the course of the module and its assessment could be used summatively; terminal examinations can have a formative impact on student learning. Nevertheless, a large number of universities and courses use coursework and examinations as the foundations of assessment.

The essential point that is being made here is that there are a multitude of valid methods which can be used for assessment. Boud (in Knight 1995, p41) considers that higher education is now in an era in which there should be correspondence between what is assessed and what students are expected to do after they graduate. It is the function of the academic to ensure that assessment methods are in harmony with the purposes, the learning objectives and the intended learning outcomes of the module and/or the course.

The practice of assessment may be influenced by the academics' orientations to assessment practice and their beliefs about assessment and its relationship with learning approaches. The type of assessment used is dependent upon the purpose or purposes of the assessment and appropriate methods should be utilised to achieve this purpose or these purposes.

6.0 Roadworks on the learning highway (or why the theory doesn't work).

Assessment of student learning is regarded by all stakeholders in higher education as a key ingredient in the higher education of students. However, its key rôle is being consumed in the general cooking pot which also has in it those other assessment ingredients which include the

assessment of institutions, programmes and teaching. The rationale for assessment of student learning is no longer as clear as it may once have been. In setting and marking assessments for students, the academic has to have one eye on the central issue of the assessment of student learning while keeping a watch with the other eye to ensure that assessment methods and processes, and the outcomes of the assessment, will not conflict with the demands of the other assessment ingredients in the cooking pot. This may be explained further by using an analogy with a 2-lane 'A' road through higher education leading to a predetermined learning outcome. The 2 lane 'A' road, as illustrated below, represents, in the one lane, the 'student learning' and, in the other, the 'assessment of student learning'. It is proposed that this is the 'traditional' model whereby the assessment of student learning runs parallel with the learning itself and complements the learning. There should be no diversions or obstructions on this road. There are always factors which impinge on and distract this process, but more and more, the number of these 'road works' are increasing, the traffic on them is getting heavier and they are now interrupting and jamming the 'A' road, making it more difficult to get to the destination on time. The fundamental rationale for assessment, which occupies one lane of the 'A' road, has been impinged upon by so many collateral rôles and purposes of assessment, that it has become mixed up to a degree which makes it no longer clear.

This is illustrated by the following diagram (Figure 1) which suggests factors that impinge on the learning and assessment process by obstructing the learning highway.

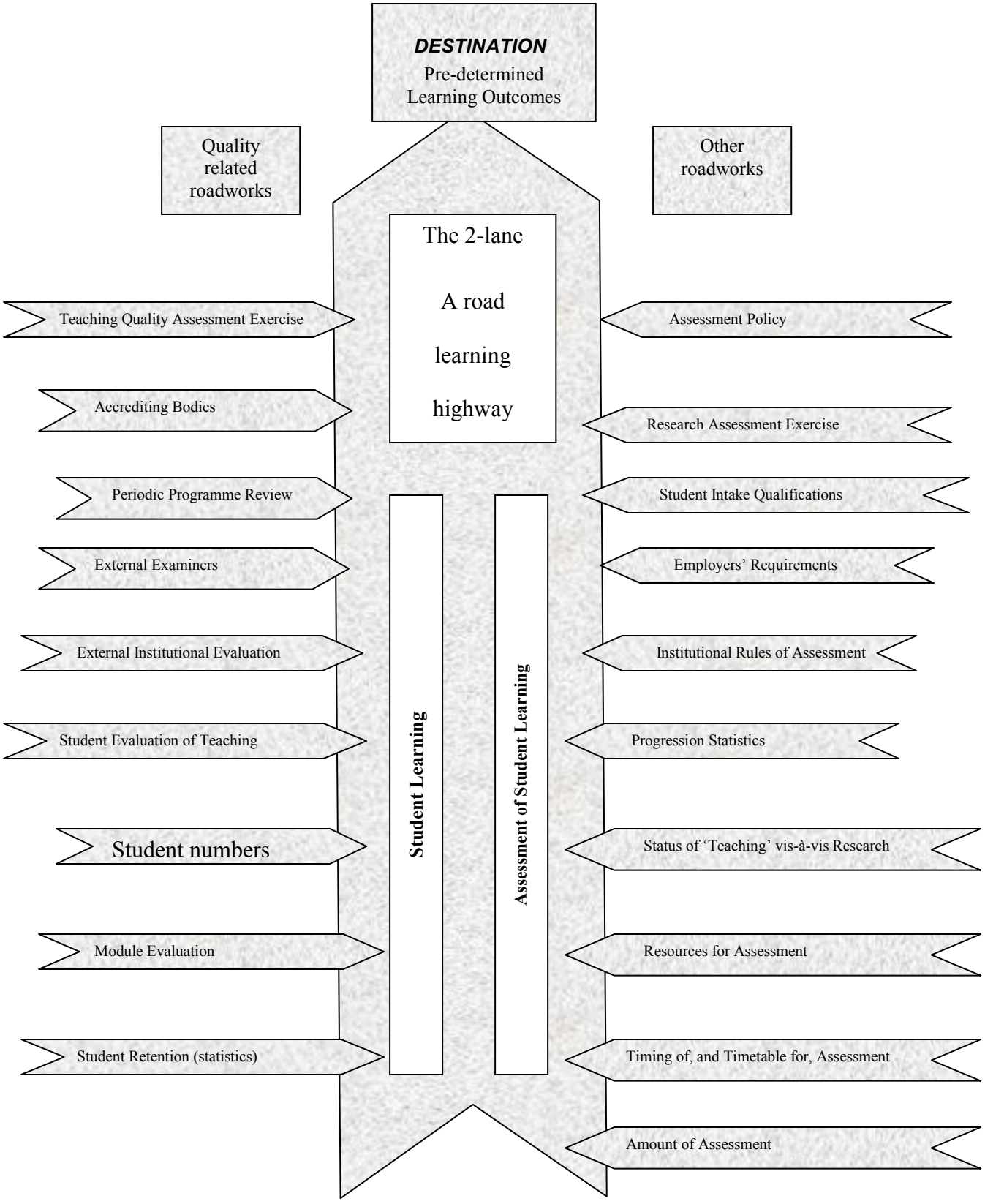

Figure 1: Roadworks on the learning highway.

7.0 Conclusion

Education is a continuous learning highway. Direction and speed on this highway are affected by assessment of student learning. The parameters of a programme in higher education are defined by the curriculum; however, students focus on assessment and their learning is driven by the assessment requirements. Assessment practices should be designed and implemented to drive and complement the learning process with the singular, focussed objective of assisting the student to optimise learning. Higher education in the UK today is subject to a host of quality assurance procedures which use the processes and outcomes of assessment as indicators of institutional and programme 'quality'. Higher Education has to deal with significant increases in the student population from more diversified educational backgrounds in a climate of diminishing resources. Competition for research funding places research at the top of the institutional agenda, placing less emphasis on student learning.

As a result of the variety of factors which impinge on assessment, the practice of assessment is governed not by the theory but by a pragmatic approach, leading to something that works. There are so many obstructions or roadworks to assessment that the academic functions in a way which ensures that s/he 'passes' internal and external institutional evaluation of assessment practice. This leads to teachers taking a 'no risk' approach to teaching, learning and therefore assessment. This could hinder innovative approaches to teaching and detrimentally affect the 'learning highway'.

Higher Education in the U.K. should work towards clearing the roadworks from the learning highway.

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