Shaping Higher Education with Students

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Learning-oriented assessment

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Sayara’s work is a valuable addition to the argument that research and teaching are symbiotic in higher education. In particular, it focuses on how the development of research skills in students requires a change in assessment practices. It argues that assessment strategies that encourage learning, rather than just measure learning, are crucial to the development of the research-focused graduates required in the knowledge economy. It explains why the engagement of all stakeholders in student outcomes (e.g. students, academics, governments, employers) will lead to processes that develop life skills rather than narrowly focused ‘academic’ skills. It introduces stratified assessment as a paradigm in which threshold capabilities can be recognised.

Professor Jeremy Levesley

1. Introduction into the R=T context

Currently, in higher education systems across the world, as a remnant of the industrial economy, we can observe an imbalance in the favouring of research over teaching (Shin et al. 2015). Over the decades, governmental encouragement for high-impact research has resulted in the establishment of institutional policies where both the promotion and evaluation of academics are mainly concerned with research output indicators. In turn, this has shifted academic staff’s interest within the education sector,
devoting more time to research and less time to teaching activities. This has led to complaints from students, and has especially become an issue for UK higher education institutions since the recent rise in tuition fees. This, in turn, raises a fundamental question: are universities citadels for research or teaching?

Hattie and Marsh (1996) indicated the need for developing and improving synergy between research and teaching. Almost two decades later, the UK Government green paper, ‘Fulfilling our Potential: Teaching Excellence, Social Mobility and Student Choice’ (BIS 2015a), set the scene for the biggest shift in the national framework for higher education in England for a generation, outlining the proposal for the Teaching Excellence Framework (TEF). It was acknowledged by the Higher Education Academy that there is a need for institutions, particularly research-intensive universities, to reconsider their commitment to improve the student learning experience. By recognising teaching as the core of academic work, and to maintain and improve the quality of teaching, students are encouraged to take advantage of universities’ cutting-edge research.

Griffiths (2004) developed a framework identifying the types of links between teaching and research, and this was further developed by Healey (2005) and Jenkins et al. (2007). The research–teaching/learning nexus as experienced by students can be research-tutored, research-based, research-led and research-oriented. In a research-led environment, students’ learning is mainly concerned with subject knowledge informed by research findings. The course content mainly consists of the current disciplinary research interests of staff, and teaching is focused on information transmission. In the research-oriented environment, students’ learning is about research processes, with the emphasis on knowledge production and development of a research ethos through teaching. In the research-tutored environment, students’ learning is via group discussions and evaluation of research findings, taking a critical-thinking approach. In the research-based environment, students’ learning as researchers is predominantly designed around inquiry-based activities in a dialogue teaching mode.

Research-based learning enables opportunities for meaningful learning by encouraging students to take part in the research process of their discipline and engage actively and creatively with questions and open-ended problems. It is broadly acknowledged (J M Consulting 2000; Elton 2001; Aitken and Tatebe 2014) that ‘R benefits T’ and the research–teaching nexus should be incorporated into university mission statements and/or strategic plans and curricular if the quality of students’ learning is to meet the needs of the knowledge economy.
2. The importance of assessment and feedback

This chapter looks at the ‘assessment’ part of the issue. The *Oxford Learner’s Dictionary* gives the following definition of assessment: ‘an opinion or a judgment about someone or something that has been thought about very carefully’ (Oxford University Press, 2016). Assessment has a direct effect on students' futures by affecting many aspects of their education, including student grades and further progress. But the validity and reliability of assessment are often challenged (Bloxham 2009) and the mix of its purposes (e.g. certification, feedback to students and teacher, students’ learning motivation, diagnostics level of understanding and course reputability) makes it hard to put into perspective.

Originally assessment in higher education consisted of formative assessment comprising peer/critic review and discussion. As the education system in the last century underwent a shift from elite to mass education, being driven to satisfy the economic imperative of the Industrial Revolution (Robinson 2010), higher education objectives focused on training the managers of industry and giving researchers the means to find new materials to feed into the engine of progress. This, in turn, caused the deviation from a learning-centred focus, instead pushing examinations and various forms of summative assessment to the core of higher education, serving the purposes of certification and selection.

These led to our current situation, where there is an over-emphasis on the measurement of learning often at the expense of the assessment for learning (Price et al. 2008). ‘Assessment defines what students regard as important, how they spend their time and how they come to see themselves as students and then as graduates’ (Brown et al. 1997, 12). It must be acknowledged that our current system of assessment, which focuses on marks and grades, is not working. A greater emphasis on assessment for learning, rather than an assessment of learning, is required to achieve a holistic sense of learning. Clearly, there is a need to change the method of assessment if we want to change what and how students learn.

3. Assessment embedded in learning

Havnes (2013) argues that assessment in learning needs to include the institutional, cultural and epistemic cultures and contexts. Hammerness (2006) holds the view that the key problems of assessment embedded in
learning are fragmentation of the knowledge base; theory and practice; and research-based and experience-based knowledge. This is in opposition to the heterogeneous and integrated nature of knowledge that is a requirement from employers as well. Havnes (2013) also argues that there should be a particular focus on assessment practices and students’ learning from the perspective of what matters in professional practice beyond higher education. But, at the moment, such courses are the exception rather than the rule.

Furthermore, the question is how could assessment aid students’ learning and the development of professionalism by supporting the learning of curricular components and also serve to connect different modules, subject areas, contexts, theories and practices to provide holistic learning? The gap is caused by both professional practice problem-solving and academia being focused on knowledge at the core of learning objectives. Subject knowledge should act as a tool in professional practice. It should be integrated as part of in-class activities via perception, interpretation and assessment of multi-layered problems. Knowledge should undergo the shift from being an object of learning to becoming a tool for attending to ‘the true object’ of professional practice (Havnes 2013). Thus, the assessment should be fit for purpose, linking assessment methods that are designed to meet students’ learning needs. Generally, there is a need for alignment between teaching, learning and assessment (Biggs 1996). In other words, we need to pay attention to assessment in curricular development.

McPhun (2010) defines integrated assessment as ‘providing an engaging and creative learning platform that closely links to the reality graduates will experience in the workforce: a process that combines and blends the learning outcomes from multiple topics into a series of streamlined, realistic, employment-focused activities; effective ways to synthesise topics into a coherent and contextualised framework using complementary skill and knowledge sets’ (McPhun 2010, 1). This requires assessments to take place throughout the programme, allowing the student to apply newly gained knowledge and develop competencies. Explicit subject and procedural knowledge-measurement should be blended into seamless assessment components that occur genuinely from multiple sources, including lecturer observation, documentary evidence, panel feedback, and peer and self-assessment.

Students undergoing integrated assessment perform qualitatively at a different level, since they are exposed to an open-ended development and are working on multiple objectives matching real-world
requirements (Heywood 2000). Creativity and ‘outside-the-box thinking’ focus on graduate success. This should address the problem identified by Burgess (2007, 5): ‘It [the UK honours degree] cannot describe, and therefore does not do full justice to, the range of knowledge, skills, experience and attributes of a graduate in the 21st century.’ To develop such a programme, one should identify common topics or skills, complementary knowledge or performance outcomes and opportunities for integration.

Eraut and du Boulay (2000) define working competence as ‘the ability to perform the tasks and roles required to the expected standard’, that is, skills or knowledge leading to improved performance. The competence evidence collected by the assessor is challenged against the benchmarks provided by the unit standards that are matched to the national professional institutions’ qualifications and requirements of the industry. It is based on the sum of all these integrated assessments that one can be recognised as competent (or not). Two key components of competency-based assessment are skills and competencies.

Skill is a task or group of tasks performed to a specified level of proficiency, which typically involves the manipulation of tools and equipment, or expertise that is knowledge- or attitude-based. Competency is a skill performed to a specified standard under particular conditions. One can be given many opportunities to demonstrate skill, and the assessment process should allow for capturing and recording such demonstrations (Witty and Gaston 2008).

4. Stratified assessment

‘. . . with our ambitions for the Connected Curriculum come the need to ensure that our assessment practices shift to respond to the new emphasis on students learning through research’ (UCL 2016, 9). As a response to this call of the UCL Educational Strategy 2016–21, a new facet incorporating research-based learning into integrated assessment might be implemented via the approach of ‘stratified assessment’. This concept was initially presented by Jeremy Levesley (2016) and was inspired by Bloom’s taxonomy (Anderson et al. 2001). The idea behind stratified assessment is that it comprises a small number of levels. All students have an opportunity to attempt all levels of the assessment, although students can opt out after each of the levels if they are satisfied with the result achieved.

The first level of the assessment is designed to distinguish on the basis of pass or fail. A student is eligible for a third-class mark by
passing an easy test on the basic topics covered in the module, which students can do on their own by reading a module core book. This level is mainly a knowledge-base check, to establish the extent to which students have understood the research findings (i.e. research-led learning).

The next level up within the assessment checks students’ ability to flexibly apply knowledge. This barrier distinguishes the 2.1 and 2.2 classification mark. This level requires not only a knowledge-based understanding but also cognitive competencies (e.g. performing complex analysis) to the extent that students can construct knowledge in the subject (i.e. research-oriented learning). A set of online preparatory sample questions can be designed and made available to the students to practise for this level of the assessment.

The final level of the assessment, aiming at the first-class mark, requires students to have an in-depth understanding of the subject knowledge, often beyond the scope of the curricular. One should be able to demonstrate a requisite variety of competencies. This level involves answering open-ended questions quite often in a real-world context. Hence, it requires synthesis across the degree, broader understanding around the subject and beyond. This level of assessment involves critical evaluation and inquiry-based (research-tutored and research-based) learning. In this way, the stratified assessment approach engages students as partners in their education and as co-producers of knowledge that corresponds to dimension six of the Connected Curriculum.

It is advisable for each student to attempt the level of the assessment that is near their zone of discomfort. Thus, the stratified assessment approach has a potential to improve the experiences of both students and staff. For academics, it reduces the pressure to set a single test so that a majority of the cohort meet the overall assignation of marks to the assessment. Assessment outcomes are more fair and reliable compared with conventional assessment.

Currently, UCL has an overarching comprehensive moderation of marking policy that informs the procedures for marking students’ work. This aims to ensure the consistency of marking, including the proper application of the assessment criteria, across students and modules. Moderation checks whether the overall assignation of marks to the full set of assessed work for an assignment is appropriate in the context of the marking of other sets and of the academic standards for the award. Hence, stratified assessment has the potential if not to completely eliminate the
need for moderation and scaling (which is a costly procedure) but at least to reduce the need for it.

All students are kept motivated, no matter what their background or level of understanding in the subject area, as there is none of the usual alignment with mid-range students. Those who are struggling to keep up with the material might decide to attempt only the pass/fail level, while the students with outstanding performance are kept motivated by the open-ended nature of the last part of the assessment.

On the downside, this approach might cause differentiation among the students and unreasonable levels of competition. While stratified assessment practice can be considered for piloting, we should also attempt to address the issues associated with such a change of practice.

### 5. Stakeholders of higher education

When looking at higher education as a business, the stakeholders would be students, potential employers, government and higher education institutions themselves. All of them are directly affected by how research materials and skills are taught at universities and thus how our society shapes its future. When deciding whether to pursue a degree at a higher education institution, a prospective student hopes that it will give them the chance to study a subject that interests them and boost their career prospects and earnings potential. In the UK, this becomes even a bigger dilemma given the recent rise in tuition fees.

It is evident that graduates earn significantly more than non-graduates over the course of their careers (BIS 2015b). However, choosing a degree programme that develops employability skills as well as provides subject knowledge, and which is offered by a university that has a good reputation with employers, greatly improves a student’s chances of landing a prestigious job (Chris Phillips interviewed by Hilpern 2008). Thus, in the knowledge economy, as the level of information technology employed within industry increases rapidly, the teaching–research nexus becomes important for future graduates’ employability opportunities. According to Jenkins (2004) students value learning in a research-based environment; however, Zamorski (2002) emphasises that they can also feel excluded in many ways.

Scott (2002, 13) has argued: ‘Not only are they [students] engaged in the production of knowledge; they must also be educated to cope with the risks and uncertainties generated by the advance of
Potential employers would like universities not only to convey the subject knowledge to the students but also to help them develop a set of skills essential for the world of business. Moreover, the subject knowledge should be cutting-edge so that a graduate leaves the university familiar with innovations in the field that would empower them with an extra ‘tool-kit’ that they can use in their professional careers. The skills obtained via research-based learning are the ability to define, plan and execute projects that require motivation, independent thinking, self-assessment, target-setting, energy and focus on finishing complex and difficult tasks (Professor James Knowles interviewed by Hilpern 2008). Therefore, curricula need to prepare students for careers where the science is complex and where its application to society is also complex.

The Government, in turn, wants higher education institutions to provide high-quality teaching and research and produce highly skilled graduates and postgraduates who will maintain society’s sustainability. To this end, higher education’s regulatory framework is designed to protect students, foster innovation and help maintain and develop the UK’s global reputation for HE excellence. Higher education institutions are expected to be more professional in their teaching, more productive in research and more entrepreneurial in everything.

6. Feeding in the NSS perspective

The students’ perspective can be seen from the National Student Survey (NSS): final-year student feedback from UK universities capturing their perceptions about the quality of the course and the institution in general. The results are used to compile university league tables (Lenton 2015). In theory, the NSS is a good idea; however, poor implementation misleads and has the potential to severely compromise the standard of education by reducing very different courses at very different universities to a simple set of metrics. With increased tuition fees, students are seen as customers who must be kept happy, and the NSS is now effectively a customer satisfaction survey. Recently, 200 student representatives signed an open letter supporting a boycott of the NSS, a symbol of the marketisation of education and of the survey itself as a flawed instrument that provides little information regarding the quality of education (Bonnar and Kelly 2013). Nevertheless, via the NSS, students make their voices heard about the things that matter to them.
7. Concluding remarks

None of the stakeholders is satisfied with ‘business as usual’ as a way of running higher education. There are apparent reasons to postpone universal implementation of research-based learning, but this will require a review of institutional-wide policy and practices to curricular design and development. Thus, before any such changes occur, a consultation should take place, gathering the viewpoints of all stakeholders involved in the higher education process.

Buckley’s (2011) investigation into staff and student perceptions of the relationship between research and teaching observed that the two groups had different expectations. Therefore, there is a need for a shared understanding of what research in teaching is and how it should be achieved.

Research-based education is key to ensure that students are taught in an engaging and challenging manner; that their subject knowledge is kept up-to-date; and that their research and evaluation skills are developed to better equip them for the challenges of their future careers. Programme designers should work to clarify the links between the tasks students complete on an assessment and the competencies those tasks are designed to measure. This should include assessment design that would be embedded into learning. ‘Stratified assessment’ has the potential to improve the assessment experiences of both students and staff.

References

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