Sustainable feedback and academic attainment: exploring the links in the modern higher education student

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Abstract

The expectation of current higher education students is that they are an independent, self-regulated learner who work in partnership with their institution to engender lifelong learning skills that can be applied in both education and employment. Such learners are able to monitor, direct and optimise their own learning by effectively evaluating their progress towards achieving their learning goals, proceeding with confidence, determination and resilience towards their desired outcomes. The central thesis advanced here is that a dialogic, sustainable feedback cycle may be the most valuable mechanism through which to develop such learners. We propose that through dialogue around feedback and effective engagement with the feedback provided, students may develop agency in their studies and improve their mental toughness and academic self-efficacy, enabling them to both set, and evaluate progress towards self-determined learning goals and thus enter into a beneficial learning partnership with agents of their institution.

Keywords

Sustainable feedback and academic attainment

The objective of the humanities subjects is to provoke creative, analytical thinking on the part of the student, rather than to assess their capacity to memorise the party line on a particular issue...this is what distinguishes education from indoctrination

(O'Donovan, 2005: 400)

This quotation, encouraging movement away from the dispensation of knowledge to passive students, has relevance well beyond the humanities and captures the essence of the tutor's role in higher education. It encapsulates education as derived from the Latin source, meaning to 'lead out or away', as students are guided beyond their current knowledge state, not to a final destination where students know what we know, but to any location from where they will know how to know what they want to know.

As we proceed with them along this pathway we should aim to instil in students the curiosity to ask interesting questions, the research skills to investigate possible answers and, perhaps most importantly, the ability to evaluate effectively their knowledge and their process of knowing. An emphasis on the process of knowing echoes throughout many facets of current post-compulsory education. The development of students' ability to learn independently and to appraise their learning has been recognised by HE sector bodies (Thomas, Jones and Ottaway, 2015). It also nestles deep with other key aspects of evaluation of higher education, such as 'learning gain'. This is broadly defined as the 'distance travelled', for example, in improvements in students' knowledge, skills, readiness for work and also personal development (McGrath et al.,2015).

The searing question though is how we as educators can best facilitate the development of this enquiring nature in our students. The answer almost certainly lies in a complex, multi-faceted, intertwined web of related concepts; student engagement, mental toughness, self-efficacy and self-regulation, with each concept already being well-articulated and rehearsed in the literature. Here the suggestion is made that possibly the best and most pragmatic solution to facilitating student progress along the educational pathway is through the process of feedback.

The modern HE student: a complex, multi-faceted, intertwined web of characteristics

There is an expectation that contemporary learners will take responsibility for their own learning, supported by the resources of the institution. As an independent learner students are encouraged to identify the salience of appropriate learning opportunities and resources and to integrate these proactively into their studies. They are self-regulating in that they are motivated towards their learning goals and able to monitor, reflect on and control their learning, reacting appropriately to evaluations of their progress. They must be supported in this endeavour by a clear specification of the factors that constitute good performance and facilitate self-reflection, in addition to the encouragement of positive motivational beliefs and increasing self-esteem, which enable them to maintain appropriate effort towards their learning goals (Nicol and Macfarlane-Dick, 2006).

Such students are often characterised as being engaged students, engaged beyond a narrow, behavioural definition of physical involvement measured in attendance and contribution to taught sessions, but engagement at a more fundamental level.

For example, in terms of a sense of their identity as a scholar, identity within their discipline, and including their cognitive, metacognitive and affective relationships to their studies, measured by their ability to influence actively processes that alter their own learning pathway. Crucially, merely identifying both the prescribed learning goals and the learning opportunities put in place to achieve these does not ensure all students are able to take advantage of them. To do so requires both confidence and the inner belief that these goals and the processes by which they may be achieved, are attainable for them as an individual.

Characterised in the literature as academic self-efficacy and encompassing a belief in the ability to execute actions to attain a desired goal, this concept is thought to be a core component of self-regulated learning. High self-efficacy is proposed to play a role in creating a sense of control and fostering the belief that positive outcomes are achievable. It may be accompanied by perceptions of challenge rather than the perceived threat that may be associated with low self-efficacy (Putwain, Sander and Larkin, 2013). As a result, students with high self-efficacy may be more capable of taking advantage of opportunities for learning since they are, not only more likely to view the opportunity as constructive but, able to view themselves as individuals who are capable of acting upon the information provided.

Educational progress can also be influenced by a student's mental toughness, an umbrella term encompassing a number of factors which represent the learner's openness to challenge, confidence, perception of control, and also commitment to persist when the learning journey gets tough (McGeown et al., 2016), a concept closely related to the wider construct of resilience with its incorporation of social

protective factors. Students who are engaged, self-regulated learners with high self-efficacy, resilience and mental toughness display more self-determination and are more likely to identify as active partners in the more generic goals of higher education. A myriad of studies have demonstrated the close, intricate and interwoven links between these factors, with much research effort currently directed towards advancing a greater understanding of the nature of the individual concepts and their inter-relations including especially how they may mutually and interactively impact.

An analogy with this endeavour can be drawn with the spontaneous knotting of agitated strings, as in the frustrating experience of retrieving your earphones from a pocket or bag; finding the bundle is a lot easier than disentangling the intricate knots. Thus although we may be able to locate the knots of mental toughness, self-efficacy, self-regulated learning and engagement, the string remains knotted and the flow of the cord through these knots remains confusing. As yet we are not able to elucidate what creates these knots, what influences how intricately the wire is knotted and nor have we been able disentangle the cord which runs through them.

Sustainable, dialogic feedback

Aligning with the trajectory to develop independent, engaged, self-regulating students has been a manoeuvre to reconceptualise feedback from event based, information-telling, tutor provision to a student-centred, task pervasive, dialogic concept (Hounsell, 2007). This shift highlights the need to readjust the metrics for assessing feedback quality, whose value should not be ascribed to its cosmetic features (e.g. the metrics of length, structure or timing) since although quality in these areas is necessary, it is not sufficient.

Indeed, Carless (2006) has emphasised that students and tutors may have differing perceptions regarding such aspects of the quality of feedback. Differences in perceptions were identified in four categories; the amount of detail provided, the usefulness of the feedback, the extent to which students are interested only in the mark and the perceived fairness of marking procedures. The most appropriate metric of feedback quality is actually its impact upon future learning. However, the route from feedback transmission to effective uptake is strewn with diverse obstacles, and critically, the ability to scale these obstructions is related to the level of engagement, mental toughness, self-efficacy and self-regulatory skills of the learner. Nevertheless facilitating such a feedback model brings advantages for both educator and learner, indeed the benefits beyond the immediate task have led to its being termed sustainable feedback. It is sustainable for tutors because it functions less as a *post hoc* comment on a particular piece of work, and more as suggestions for potential applications to generic future work. This broader focus also makes it sustainable for the student since they draw away from the need/expectation of an external other to evaluate their progress to accomplishing their learning goals and move towards self-regulation of their achievements.

Sustainable feedback as a mechanism to facilitate the development of the learner
Having the perspective of an engaged, pro-active, self-regulating learner, displaying strong mental toughness undoubtedly increases students' ability to be receptive to feedback advice and to implement this advice effectively. However, processes within sustainable feedback might also help to facilitate the development of this advantageous educable profile in students who are less effectively engaged, lack strong

motivation and mental toughness and who may have low self-efficacy, especially regarding their ability to capitalise on their feedback. That feedback can produce this impact has been articulated previously in the literature. Nicol and Macfarlane-Dick (2006) proposed that the principles of high quality feedback should serve to encourage dialogue around learning, facilitate the development of self-reflection and regulation and promote positive motivational beliefs and self-esteem.

Effective feedback should help the student understand more about the learning goals set, their own progress and achievement in relation to these goals, and about what is required to narrow the gap between the current and desired learning status. The aim should be to design the curriculum such that timely opportunities are provided to encourage self-appraisal and regulation, for example involvement in planning the learning goals, self-evaluation against assessment criteria before summative assessment, scaffolding the progression of skills by gradual increments in learning challenges. Carless et al. (2011) identify a number of practical ways in which sustainable feedback might be implemented. This includes: involving students in dialogues about learning which increase their understanding of the criteria of high quality performance; incorporating feedback processes which promote the development of students' ability and willingness to invigilate and appraise their own learning; and enhancing students' lifelong learning capabilities by supporting their goal planning and setting skills; and requiring assessment task design which supports the cross-pollination of feedback sources to multiple learning opportunities. Implementing this form of feedback would also enable students to develop their self-assessment skills to allow them to evaluate their feedback to develop further their own

learning strategies (Orsmond and Merry, 2013).

Echoing the views of Nicol and Macfarlane-Dick (2006) we propose that effective, dialogic, sustainable feedback may lend itself well to the development of the various perspectives and characteristics valued in the HE student. Returning to our analogy of earpieces connected by entangled wires, we view the endpoints as the observable behaviours of feedback and attainment. The wires connecting them may be differentially knotted and entangled, representing the individual's specific characteristics of mental toughness, engagement, self-efficacy and self-regulation (less positive/strong characteristics being more knotted and entangled and inhibiting the flow of energy along the wire). Thus some pathways along which the educator must guide the learner will be more direct and free-flowing, others more convoluted and obstructed by barriers, but the connections between feedback and attainment remain unbroken. Delivering high-quality, sustainable feedback may not only provide the impetus to improved academic attainment, but may also help to even out the kinks and knots of self-efficacy, engagement, mental toughness and self-regulation along the way.

This viewpoint emerged in relation to work on a Curriculum Enhancement project at LJMU, that explored the role of students' academic self-efficacy in their perception of and responses to feedback. One motivation for the project was the relatively poor appraisal of feedback by students. Aspects of academic self-efficacy were found to be associated with individual differences in perceptions of the quantity and the quality of feedback provided, however, both self-efficacy and academic attainment were even more closely related to students' judgments of their ability to capitalise on this

information and its ability to influence their learning journey. In reflecting on these findings we began thinking more broadly about the impact of non-cognitive attributes on the links between feedback and attainment and our perspective evolved to one which emphasised the complexity and inter-related nature of these attributes.

We have now come to appreciate that efforts exerted to improve student satisfaction by increasing the value they attribute to their feedback through the introduction of dialogic, sustainable feedback, may also deliver critical benefits to those learning characteristics so highly valued in the modern HE student.

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