How do students understand and interpret learning gains? Perspectives from in-depth interviews of UK distance learners

Simon Cross, Jekaterina Rogaten, Duygu Bektik, Denise Whitelock, Bart Rienties
Institute of Educational Technology, The Open University, UK

Abstract

Universities are increasingly looking Learning Gains as a means for the effective measurement of student progress and the contribution they make to their students' learning and development. However, there remains much to understand about the validity and reliability of these measures used. This paper seeks to probe the relationship between how students understand and interpret the learning gains they experience and the proxy measures of learning gain such as assessment marks universities use. The findings are based on an analysis of nineteen semi-structured interviews of UK distance learners. The paper will present key findings and discuss their significance in respect to how to reconcile students own experience of gain and proxy measures of gain and the assumptions on which learning gain measures are predicated.

1. Introduction

Higher education (HE) sector in the UK is currently undergoing a transformation following the recently introduced Teaching Excellence Framework (TEF) that aims to assess universities on their teaching excellence (Department for Business Innovation and Skills 2015; McGrath et al. 2015; Howson and Buckley 2016). Universities will therefore be expected to better demonstrate the learning value they provide to students. In response to TEF there has been mounting interest in the UK and also in the USA (Pascarella and Blaich 2013) as to how HE can accurately measure and assess Learning Gains.

A learning gain can be defined as the change in knowledge, skills, and abilities over time as a result of targeted learning process (Rogaten et al., submitted). For example, this may be in respect to: development of the conceptual understanding of the topic (Hake 1998); confidence in scientific reasoning (Beck and Blumer 2012); scientific writing and reading (Coil et al. 2010); critical thinking (Mortensen and Nicholson 2015); problem solving, creativity, technical skills and communication (Gill and Mullarkey 2015); or interest in political and social environment (Pascarella et al. 2012). In addition, recent studies have attempted to estimate students' learning gains using assessment grades as a proxy for academic performance (Rogaten et al., 2016, 2017) and how such measures are effected by other variables such as motivation (Liu, Bridgeman & Adler, 2012). Pascarella et al. (2011, p.24) suggest average gain score need to be interpreted with caution and signal many outstanding issues need investigating.

The central research questions of this study seek to probe these issues further and are three-fold: how do students understand and interpret the learning gains they experience; how do they understand and interpret proxy measures of learning gain (such as assessment grades); and the extent to which the two can be reconciled.

2. Methodology

Research participants were invited to undertake three related tasks: a questionnaire survey, a two-week study log and an interview. Stratified sampling was used to select a group of students achieving low, average, and high marks. Nineteen semi-structured telephone interviews were conducted by the authors of this paper (Kvale, 1996). All students were part-time UK distance learners who were at least one third the way through their degree. Ages ranged from under 25 to over 56 and students from across the UK (including Northern Ireland) were included. This is typical of the student demographic who study at the university. Interviews took place after completion of the two other tasks and lasted 20-45 minutes. Interview questions asked about: students perception of progress and gain; cognitive, behavioural and affective change; relationship between grades and progress; study expectations and workplace relevancy. Initial interrogation of interviewer notes and a second listen to the interviews has identified a range of emerging themes. Detailed anlaysis from supplementary coding using a grounded theory approach (Charmaz, 2006) is in progress.

3. Results

Students were found to have a range of study goals, previous learning experiences and study expectations. This was expected given that distance learning students comprise a heterogeneous cohort of learners. It was found that some students were in work but returning to education to gain skills and knowledge for career development; some had personal goals; and others were early career students seeking a first Higher Education qualification. These expectations influenced the priority placed on gaining and maintaining high grades in assignments. Almost all students reported, often quite emphatically, that they felt they were making progress.

One key finding is that most students identified Level 2 (equivalent to second year) as a transition point where they became more confident in their ability, sophisticated in their approach to learning, and better capable of critical reasoning. Students became aware of this relative gain in confidence by contrasting where they were now and a year or two ago; either in respect to confidence in talking to fellow professionals and performance at work, or social confidence when mixing with friends.

The learning experience of Level 2 modules also marked a perceptible shift in the role and value that many students placed on formative assessment. Across all university modules students typically receive individual feedback on six assignments per 60-point module so by Level 2 formative feedback will have become a standard part of the learning experience. In such cases, students chose to commit a greater portion of effort on maximising learning rather than maximising their mark. This was particularly noticeable when learning had a direct relevance to work, when a student had decided to recast their study-work-life

balance (in favour of work or life), and/or when marks had become less important as a motivator.

A second finding was that a fall in average marks from one module to the next was not necessarily perceived as indicating a fall in learning gain. Students usually gave sound and well-reasoned explanations for why they received lower marks in comparison to earlier performance. For example: a student could be talking a module that did not logically 'follow' their last; the student was expecting modules to 'get harder' as they progressed; the module was less aligned to their study interests; or the student was prioritising effort due to studying several modules concurrently. Other cases revealed a student who felt they had learned most on their current module despite their grades being lower, and another admitted to achieving good marks only because they understood how to write assessment. Receiving both lower or higher marks were considered motivating but in different ways.

4. Conclusion

Initial analysis indicates that there is a change in how distance learners perceive learning gains as they progress through their undergraduate degree course and the second year/level represents a key transition point. Secondly, the relationship between assessment marks and the student perception of learning gain is not straightforward and cannot be assumed. Rather, students interpret marks in the context of their study, social and work lives and interpreted the significance of a mark received accordingly. These two themes, and others identified during the study, raise questions about the assumptions on which learning gain measures are predicated.

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