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**Title** Student-directed use of individual and cohort learning gain data to monitor professional skills development

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### **Student-directed use of individual and cohort learning gain data to monitor professional skills development**

In this staff-student partnership project we use measurement of learning gain in a cohort of part-time MBA in Higher Education Management students to stimulate developmental reflection on professional learning by both students and staff.

Learning gain has been defined as: “an attempt to measure the improvement in knowledge, skills, work-readiness and personal development made by students during their time spent in higher education.” (Higher Education Funding Council for England, 2015)

Learning gain measurements can be used along with statistical analysis to compare institutional teaching performance in schools (Lui, 2011). Charting the ‘distance travelled’ by students gives a fuller picture of a school performance than is provided by exit performance data alone. This means that schools with lower performing intakes can demonstrate teaching effectiveness even though the examination results may not be high. Such ideas could be applied to higher education but Hughes (2017) has argued that comparing institutional teaching performances through learning gain is difficult and unreliable and that learning gain measurements may be particularly valuable for individual learners and teachers.

Whilst most learning in HE is assessed by demonstrating the meeting of one or more broad learning outcomes, what is not shown is details of how far students have come in reaching this point. Learning gain measurement can be used to judge the value added offered by a course of study in addition to conventional marks by tracking the progression of a student’s development in programme relevant skills or attributes.

The MBA in Higher Education Management attracts university managers of all levels and from a variety of institution types and countries. The project aimed to help students use learning gain to develop a reflective approach to considering their progress and achievement in a range of academic and professional skills for management to give a more nuanced picture of their learning. In addition, the project aimed to benefit for the teaching team by tracking relative student progress in a different way to the assessment of academic essays or project work. It was hoped that we might highlight any gaps perceived by students both in their knowledge and practical skills.

Learning gain can be measured quantitatively or qualitatively through increase (or decrease) in recorded marks or skills assessments over a programme or through self-evaluations (McGrath et al. 2015). The study was based on a self-reporting of confidence questionnaire which was administered before the taught programme commenced and then on three further occasions over the two year period of the programme by the student-researchers from the cohort. Participation was voluntary and students were invited to invent their own personal identifier for anonymity but which allowed the participation of individuals to be tracked. The questionnaire was based on the aims and

objectives of the programme. There were eleven questions which covered confidence around three areas:

Knowledge of policy and research around the management of higher education

Application of concepts in the student's current specialism or job

Application of concepts in situations outside of the student's current specialism or job

The same questions were presented on each occasion and students were asked to rate their confidence on a five point Likert scale. 18 students began the study with 12 making contributions every time that the questionnaire was presented. The raw results were averaged for each time point to give an aggregated measure of cohort learning gain. Students were interviewed by a peer researcher about how useful they found the process of tracking learning gain and seeing the overall cohort results.

This paper will explore this use of learning gain measurements from the student and the from the course team perspective. For example, results generally showed a rapid increase in reported learning gain between beginning the programme and completing the first module and essay three months later, followed by smaller or negligible increases in confidence over two years never reaching a high level of confidence. This raises questions about the programme and assessment design – are students being stretched once they have attended a module and understood the requirements of the first assignment? Does filling in the questionnaire enable students to reflect on their individual progress in relation to the cohort and set themselves more challenging goals? Could this learning gain data be used as part of the assessment as an ipsative or progress assessment (Hughes, 2014, 2011) in addition to outcomes based assessment?

In the application of concepts in a student's own job or role reported confidence was not unexpectedly higher before the course began than in the previous set of questions. The same pattern of an initial jump in learning gain was seen following by a flattening off in subsequent data collections. Indeed, a question asking about confidence around analysing management drawing on experience showed a slight drop in the final questionnaire. It is possible that in some circumstances, especially where students begin with pre-conceived ideas about their own experience, increased knowledge could reduce their confidence. Awareness of such trends could be a positive result if it leads to greater reflectiveness and consideration of their own practice.

As might be expected, the questions around application of concepts in unfamiliar environments showed a lower starting confidence than the previous area. They also showed reported learning gain happening throughout the programme rather than just in an initial jump. A feature of the MBA programme is getting students from different professional specialisms working together in syndicate tasks which allows for sharing of skills and experience. These results may be a reflection of these group-working environments.

This is a small scale pilot on use of personal learning gain data and it has limitations of lack of scalability. For this to occur data collection and analysis would need to be automated but the findings so far indicate that this would be worth the technological and staff investment. The student-staff partnership in the research was particularly useful in ensuring that the cohort interest in the project did not wane too much over two years and for exchanging frank views.

## References

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