Assessing programme-level outcomes via e-portfolios
Sheffield Hallam University (April 2019)

Summary

The design of a new BSc. (Hons.) in paramedic science at Sheffield Hallam University, home to paramedic diploma courses since 2003, has prompted fresh thinking about how modular courses are assessed.

As students achieving individual module learning outcomes were not always able to meet programme-level outcomes with the same degree of confidence, the BSc. course team has devised a self-assessment tool so that students can measure their own progress against higher-level outcomes.

With a strong employability record, Sheffield Hallam University offers applied programmes of study at degree, diploma and degree apprenticeship level, and many have integrated e-portfolios into course design. Sheffield Hallam adopted PebblePad as its e-portfolio tool in 2007, but it was not until 2013 that PebblePad began to be used in paramedic practice.

Challenge

In a demanding frontline care profession such as paramedicine, practitioners need to draw on a combination of knowledge and practical know-how to provide the best emergency care for patients. So when designing the programme for the new BSc. course, the team began by establishing exactly what attributes and skills the “end product”, the paramedic, should have.

From this starting point, the team drew up the programme-level learning outcomes which were mapped to the Health and Care Professions Council’s standards of practice before being integrated into the design of individual modules. But was this enough for students to graduate fully competent and confident about their professional practice?

The team recognised the need to assess students’ understanding and confidence at a programme level as well as testing their competence at the conclusion each individual module:

“*It was not immediately apparent to us to what extent students felt confident in their ability to meet the overarching programme-level outcomes. We needed to develop a system to track the students’ progress towards meeting the higher level outcomes throughout their three-year programme.*”
Andrew Kirke, senior lecturer in paramedic science, Sheffield Hallam University
Solution

Since the adoption of PebblePad in 2013, lecturers in paramedicine at Sheffield Hallam have explored the full potential of the platform to provide innovative approaches to course and assessment design.

First came the move to electronic portfolios of evidence. These clearly had the advantage over paper-based versions for students working long shifts in multiple locations so the team worked with PebblePad to develop a bespoke electronic clinical assessment portfolio known as e-CAP. A structured reflective assignment based on student’s real-world clinical practice, but using anonymised patient assessment records, also came on stream.

In addition, throughout the programme, student paramedics develop a professional portfolio which is assessed at the end of the course. Successful completion of this element leads to registration with the Health and Care Professions Council, but many students continue to use these e-portfolios for continuing professional development (CPD) once in employment.

As a result of these developments, paper-based systems had largely been replaced by online evidence gathering by 2018, but with the advent of PebblePocket came new possibilities. The app powered by PebblePad would enable student paramedics, often on the road or in locations without wifi, to access their PebblePad accounts from their mobile devices. This meant they could capture and upload items of evidence, known as assets, from any location.

With increasing confidence in the ability of PebblePad to cover the assessment needs of his courses, senior lecturer in paramedic science, Andrew Kirke, turned again to the platform to devise a way for students to assess their modular achievements against programme-level outcomes.

PLOTTing the way forward

Self-assessment is one of the most important academic skills for effective learning. Understanding of this has stemmed from the work of Gibbs and Simpson and Nicol and Macfarlane-Dick, among others, in the UK, plus Boud and Sadler in Australia. Further discussion of this topic can be found in the publication, Effective practice in a digital age (Jisc 2010) and in a short video outlining how the REAP principles have impacted on practice at Strathclyde University.

Consequently, when looking for a methodology, the course team chose to introduce an element of self-assessment. They evaluated a number of options in the design toolkit in PebblePad and also considered whether learning outcomes should be student assessed, tutor assessed, or a combination of both.

The process is as follows. Using a numeric capability block, students rate their achievement and progression against the four main groups of programme-level outcomes which are:

- Knowledge and understanding
- Intellectual skills
- Subject-specific and/or professional/practical skills
- Transferable/key skills.

Students’ ratings are then exported into a CSV file via the reporting facility in ATLAS, PebblePad’s Active Teaching Learning and Assessment Space, and converted into an infographic. The tracking system is known as the “PLOT” or programme-level outcomes tracker.

At the end of the last semester of each year, students review the outcomes of their self-assessment in meetings with their personal tutors when the infographic is added to their PLOTs as evidence of progression. The PLOTs can then be added to students’ overarching course portfolios, creating a single access point from which personal tutors or academic advisors can discuss progress with their students. The process is illustrated on page 3.
Fig. 1: Using a numeric capability block, students rate their achievement and progression against programme-level outcomes.

Fig. 2: Outcomes of the student’s self-assessment are converted into an infographic for discussion with the personal tutor or academic adviser.

**Benefits**

“Individuals’ ratings have enabled tutors to identify students who, although having passed their academic assessments, feel they are not progressing against programme-level outcomes. Personal and academic tutors can then implement appropriate action plans.”

Andrew Kirke, senior lecturer in paramedic science, Sheffield Hallam University

The results of the tracking tool to date have been very positive, leading to a potential scaling up of the methodology across the whole integrated care curriculum. Key benefits have been:

- PLOTs have enabled the course team to see how the whole cohort feel they are faring. This makes it possible to identify areas of the curriculum which need improvement or adjustment.
• When students under- or over-estimate their level of progress, a discussion of the reasons can be very fruitful. The team recommends students have yearly face-to-face reviews with their tutors to enable them to have these in-depth evaluations of progress with students
• In this way, advisors proactively manage the achievement of learning outcomes before students enter into the workplace without being fully ready
• With alumni access to PebblePad accounts, students can continue to use their e-portfolios through to registration with the Health and Care Professions Council and beyond, enabling the paramedics of the future to maintain the same reflective, professional approach to their work.

For more information

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