Establishing skills of reflection
Keele University (April 2019)

Summary
Assessed in their pre-registration year by a portfolio of evidence, pharmacy students at Keele University work on their reflective skills from the first days of their degree course. PebblePad workbooks provide each year group with a scaffolded programme of reflective activities, supported initially by face-to-face training sessions and eventually by e-mentorship as students progress through their degree.

This careful, incremental approach to skills-building gives students a good grounding in the reflective practice required by the General Pharmaceutical Council (GPhC)’s revalidation framework for pharmacy professionals. It also provides insight into how to prepare students for reflective practice in e-portfolios.

Challenge
Becoming a pharmacist involves a minimum of five years’ training. Typically, this means a full-time, four-year degree course followed by a one year of pre-registration training in a pharmacy during which trainees build up a portfolio of evidence to demonstrate their competence.

By the end of the pre-registration year students must demonstrate full competence in their new role – a case of “does as the norm” rather than “knows about” or “shows how” something can be done. Miller’s triangle of clinical competence from the GPhC Standards for the education and training of pharmacist independent prescribers (January 2019) illustrates this staged progression.

![Miller’s triangle of clinical competence](image)

Reflection on their learning helps students acquire the critical understanding of their role that underpins the higher levels of achievement. However, few students commence a pharmacy course with skills in reflection. Most commence their degree via A-levels in science and are better skilled in writing factual reports than evaluating their
learning experiences. Consequently, the school of pharmacy has had to find ways of enabling students to become the reflective, fully competent practitioners the industry requires.

**Solution**

The school's response was to evaluate PebblePad, a tool already provided at the university for reflection on learning. Others may find useful the criteria the school used to test the platform for suitability in this context. These are as follows:

- Is it possible to create a sense of progression so that students gradually acquire and implement reflective skills?
- Is the platform easy to use so that students focus more on what they write rather than how to use the technology?
- Are there different templates to support different kinds of activity – for example, text boxes, checklists, uploading of evidence from other sources?
- Is it easy for tutors to provide feedback and feed forward?
- Is the platform accessible from the virtual learning environment (VLE)?
- Are students’ skills in reflection taking them forward to constructing and planning what they will do next?
- Will students have lifelong access to their e-portfolios?

The answers to all questions were positive. PebblePad's customisable templates, interactive workbooks, secure online environment and continuing availability post course fitted the bill. Most importantly, with recent adjustments, PebblePad's templates can be tailored to the desired approach to skills development.

Now, after 12 years of development and experience, activities in PebblePad workbooks are proving a highly effective way of building students’ capacity to learn through reflection the skills they need as pharmacy professionals.

**Support**

Despite the affordances of e-portfolio platforms, Tracey Coppins, teaching fellow in the school of pharmacy and now head of the university's health foundation year, says that face-to-face induction is essential to introduce students to this new way of working:

>“Despite the challenges posed by increasing student numbers, we know the best route to success with e-portfolios is through face-to-face training. We provide two hours of support on the role of e-portfolios and further IT induction support at the start of Year 1. This way, no student tackles their e-portfolio tasks unprepared.”

Tracey Coppins, head of health foundation year, Keele University

Across the four years of the course, the level of support can, and should, be reduced – students need to be proficient in reflecting, planning and implementing their own action on their learning experiences to become independent reflective practitioners. However, Tracey believes it is important to begin e-portfolio use with a planned programme of support in place:

>“You can’t expect your students to become independent, competent learners capable of evaluative reflection on their own performance if you don’t show them first how to get there!”

Tracey Coppins, head of health foundation year, Keele University

For back up, students are also provided with a handbook which explains the professional requirements for pharmacists, and includes other relevant information such as deadlines and assessment criteria. Moreover, when students start on their assignments, each section of the workbooks in PebblePad gives more detailed information with questions to prompt students into taking the right approach.
As the course progresses, the structure of the portfolios changes. Each year, students are given different tasks to build their capacity to plan their own route to improving their performance. In addition, they are increasingly asked to reflect on competencies relating to the standards set by the GPhC for pre-registration students. All activities aim to build understanding of what is needed to gain registration as a pharmacist. The end goal is that each portfolio records a process of learning rather than itemising a list of competencies.

Some of the core topics used in reflective exercises in Stages 1 and 2 cover essential employability skills, such as team working, negotiating and communication skills. Here, students can bring forward examples from outside the course as evidence and as topics for discussion. Then at Stage 3, students are asked to show evidence of carrying out and reflecting on their own continuing professional development (CPD), once again using workbooks to scaffold their skills.

Tutors give feedback with guidance on how to improve at various points in the year. At the point of summative assessment, workbooks are submitted for assessment on a pass/fail basis. Students receive a copy of the mark sheet showing which criteria have / have not been met with feedback for further improvement during the following academic year.

### Outcomes

Now online in PebblePad, the evidence of student progression and achievement is secure, easy to access from different locations and cannot be lost or damaged in transit. There are also considerable sustainability gains from going digital. In comparison to e-portfolio-based evidence, paper portfolios waste resources, are bulky to store and difficult to pass around a team of markers.

An additional benefit from working in a digital environment is the school’s e-mentorship scheme. Inviting alumni to mentor students currently on course, the scheme has grown to give an increasing number of Keele’s pharmacy students insights into the value of reflective skills in professional practice:

> “I vividly remember my lack of comprehension of the value of written reflection during my own time on the MPharm course. [But] my work over the last few years has led me to a deeper understanding of how written reflection can guide you to a conclusion that may have eluded you beforehand.”  
> **Former student applying to become an e-mentor**

The success of PebblePad workbooks on the MPharm degree has inspired the health foundation year at the university to follow suit. This course gives students not meeting the criteria for direct entry the chance to work towards a degree in the faculty of medicine and health sciences. Its portfolio element requires evidence of critical reflection on the development of student learning. Before 2018, this was routinely submitted on paper but the benefits of the digital alternative are now clear to students and tutors on the course:

> “We set up PebblePad accounts so tutors and mentors always have access to students’ portfolios. This way, they can monitor their students’ work, provide feedback and assess when required. Students do not leave portfolio evidence collection to the last minute and content is neater, more secure and much easier to manage. Who wouldn’t change to e-portfolios?”  
> **Tracey Coppins, head of health foundation year**

### Find out more

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