

The Evidence Base for the Use of Learning Portfolios in Medical Education

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Portfolio use marks a shift from traditional summative (i.e. examinations based) evaluation to the use of more formative methods based on experience and workplace assessment. It reflects greater emphasis on continuing professional development and lifelong learning (Willkinson, 2002).

The term 'learning portfolio' usually consists of two elements - a record of educational experience and a tool to encourage reflective learning (Cole, 2005; Rees, 2005; D. Snadden, Thomas, M., 1998). To work effectively for reflective learning, portfolio content needs to include training goals and identify gaps in knowledge or experience, leading to the formation of future goals (E. Driessen, Van Tartwick, J., Overeem, K., Vermunt, J., Van der Vleuten, C., 2005; Rees, 2005). Portfolios should include details of failures as well as successes. Portfolios simply used as a logbook for examination purposes are of limited benefit in this regard (D. Snadden, Thomas, M., Griffin, E., Hudson, H., 1996).

Portfolios have been in compulsory use for learning and assessment in nursing and allied health disciplines for a decade and are regulated by the English National Board for Nursing, Midwifery and Health Visiting. However, there has been a comparatively later start in the published literature concerning their use in postgraduate medical education. In one study conducted in the general practice setting, the advantage of portfolio use was seen as a tool in promoting reflective learning, in addition to aiding supervision and planning future learning goals (Challis, 1997; D. Snadden, Thomas, M., Griffin, E., Hudson, H., 1996). However, considerable barriers were cited by participants to continued portfolio use, including resistance to forgoing didactic teaching methods, lack of time, and preoccupation with passing examinations (D. Snadden, Thomas, M., 1998). These findings were mirrored in a recent study of nursing students (McMullan, 2006). Voluntary use of portfolios was limited and only increased if the process was compulsory (Dorman, 2002). Portfolio use tended to decline over time, and depended on the learning style and attitude of the individual.

There have been two recently published literature reviews updating the available evidence, one on portfolio use in undergraduate settings (Buckley et al., 2009), and the other across undergraduate and postgraduate settings (E. Driessen, Van Tartwijk, Van Der Vleuten, & Wass, 2007).

Buckley et al (2009) conducted a systematic review, using the BEME (Best Evidence Medical Education) protocol, and concluded that the standards of studies have risen, with statistically significant differences in the Kirkpatrick hierarchy scores given to those published prior to 2000 compared to those

published after 2005. The main findings of the higher quality studies were improvement in student knowledge and understanding (28 studies, 6 at Kirkpatrick Level 2 or above), greater self-awareness and encouragement of reflection (44 studies, 7 at Kirkpatrick level 2 or above), and the ability to learn independently (10 studies, one at Kirkpatrick level 2). Although student knowledge and understanding, and the ability to link theory to practice, were reported, the authors noted that studies did not demonstrate correlations with improved scores in other assessments. The time commitment to compile a portfolio was the main drawback noted in the literature.

The earlier review (E. Driessen et al., 2007) concluded that the positive effects of portfolios were strongest in undergraduate education, but were also seen in postgraduate settings. The authors recommended that portfolios can be used to support and assess competency development, and are most effective when well integrated into the curriculum and supported by a tutor or mentor. They also highlighted that inter-rater reliability was good when assessing portfolios, suggesting that the criticism of subjectivity may be unfounded.

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