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Medical Education @ Cardiff

Evaluate Work-based Learning

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With a shortening of specialist training, precipitated by Calman and the European Working Time Directive, there has been a significant reduction in training time overall and therefore a need to ensure that the quality of training is enhanced and effectively evaluated. Work-based learning takes a variety of forms. It may be planned or unplanned. Work-based learning is defined in a variety of ways and Burton and Jackson (2003) suggest that it can be seen as learning for work, learning at work, or learning from work. Examples would include a variety of activities such as; advanced trauma & life support (ATLS) courses, supervised surgical procedures and consultations, e-learning and significant event analysis.

*Evaluation can be regarded as:
“Gathering information about all or part of an educational programme or process for the purpose of making judgements about its merit on the basis of which developments may occur”*

(Coles & Grant, 1985:407).

If we consider this in relation to medical education and continuing professional development, then we can see that this leads us to argue that the apprenticeship model is no longer the accepted way to learn a profession. In an apprenticeship scheme the student or trainee will spend a considerable period of their time learning from the ‘master’. Regrettably in medical education we no longer have the luxury of time. Service demands and political pressures pertain and there is a need to be explicit as to the potential opportunities that will present themselves for learning in the workplace. This requires the use of programme evaluation in order to identify appropriate instructional strategies and courses of instruction and to influence the design and development of increasingly effective future learning experiences.

Evaluation can be implemented for a variety of purposes. There can be formative evaluation in which there is a gathering of information aimed at improving the quality of the course by bringing about improvements. Summative evaluations make use of the information collected on the effects of a programme and this is then used to make decisions about its future (does the course deserve expansion, or increased funding?). However there is a danger that evaluations may sometimes be used in a programme as a matter of routine, or simply because they are considered a ‘good idea’, without any clear articulation of the underlying purpose or intent (Rossi, Lipsey and Freeman, 2004).

In relation to work based learning Kirkpatrick (1998) suggests that in order to define what particular aspects need to be evaluated one needs to focus on the level of information required. The models depicted below, indicate the ways in which the Kirkpatrick hierarchy can be applied to an evaluation of the learning that occurs in a professionals setting. Often the questions used in evaluations and the priorities that are set for them are focused in the lower order levels of the pyramid model. By avoiding superficiality when evaluating your work-based learning experiences there is a much greater potential for more valuable information to be obtained when the emphasis is on an evaluation of the higher levels.

There are a number of practical steps that can be taken in an evaluation, but the model that is chosen will be driven by the values that we hold as educators and the features of the programme that we consider worthy of evaluation. One way to determine what to evaluate is to consider whether it is the **product** of the learning experience i.e. the learning outcomes that are important or whether you are more interested in the quality of the teaching activities and learning experiences i.e. the **process** (Morrison 2003). Pragmatically it is usually best to adopt a mixture of approaches tailored to the goals of the evaluation.

If we consider Modernising Medical Careers (MMC), the new foundation programme which is a work-based, competency assessed curriculum as an example of a programme evaluation there are a variety of ways in which this could be evaluated, dependent upon our focus.

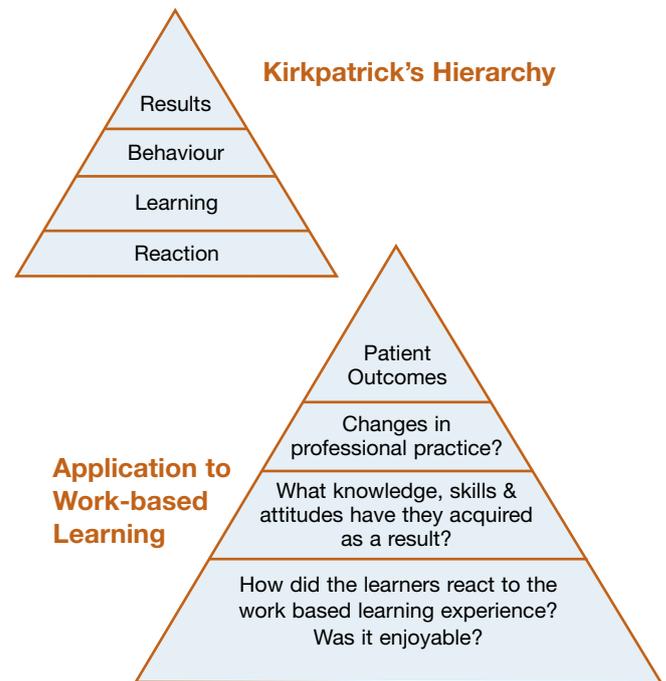
If we are aiming to find out how effective the learning is on the MMC programme for example, then we need to consider the precise nature of

the evaluation instruments that we should use (Davis & Harden 2003). If our focus is on the Product (outcome based assessment of trainees) then the most appropriate ways in which we can evaluate the learning would be via a variety of techniques that would enable us to gather data that would demonstrate a change in thinking and in practice. This could be undertaken by a variety of methods; peer and self assessment (would enable audits of changes in practice). Portfolios & other records of performance, for example reflective logs, clinical or practical assessments, observations, either direct or on video, and written assessments.

The Process would be to make use of questionnaires and or focus groups / semi-structured interviews with students and self and peer evaluations of teaching (including video assessment).

Evaluation is purposeful, applied social research. In contrast to basic research, evaluation should be undertaken to solve practical problems. However evaluation data that are collected and then left on a shelf are not meaningful. The results need to be collated, interpreted, reflected upon and reported back in order to improve the work-based learning experience for the benefit of the future learners and to ensure good patient outcomes.

Product	Process
Achievement of learning outcomes or competencies	Curriculum: Content or syllabus Unplanned learning opportunities Assessment methods
	Aptitude of teacher: Teaching methods Skills in assessment Skills in feedback Mentorship / appraisal skills
	Resources: Access to skills labs Access to appropriate courses
	Communication: Website Records
	Organisation of teaching: Administrative arrangements Technical support Physical environment Protected tutorial time



Further Information

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This paper has been produced by the main authors during their time as students on the MSc in Medical Education at Cardiff. It was developed as an outcome from a work based learning programme that they, in conjunction with others on the course designed, developed and delivered as an integral part of their learning experience.

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