

Evaluation in medical education

Dr. Kieran Walsh,
Editor,
BMJ Learning.

Evaluation

“With undergraduate medical education alone costing in the region of £1 billion per year in the UK it is essential that its cost-effectiveness is established. Without proper evaluation the cost-effectiveness of medical education would be difficult to establish.”

John Goldie

Evaluation

The knowledge of students is *assessed*

The effectiveness of medical education programmes is *evaluated*

Evaluation

- Is this course we have set up any good?
- We have invested time, money, energy, resources? What is the value of what's been created?

Evaluation

- Praises and rewards good practice in medical education
- Gives recommendations for improvements in the case of poor practice

Evaluation

- Should follow best practice
- Should be
 - Valid
 - Reliable
 - Acceptable
 - Feasible
 - Useful
 - Strong impact in the right direction
- Goals should be clear from the start

Evaluation – steps

- Decision to evaluate
- Why are we evaluating?
- Who are we evaluating for?
- What questions do we want answered?
- Methods
- Action
- Report/disseminate
- Improve
- Start again

Evaluation - decision to evaluate

- Should be made early (not left to last minute)
- Should be part of programme planning

“While it is easy to think of curriculum design, teaching, assessment and evaluation as separate issues, in reality they are closely inter-related.”

Richard Hays

Evaluation - why are we evaluating?

A range of potential reasons

- To find out the effectiveness of a workshop for attendees
- To find out the *cost effectiveness* of a workshop for its funder
- To show that planned learning outcomes have been achieved
- To give pointers on how a programme can be improved
- Many others

Evaluation - who are we evaluating for?

- Yourself
- The dean
- Educational institution
- Publication in a journal
- Students
- Funder
- Multiple audiences

- For different audiences, evaluation will be very different

Evaluation - what questions do we want answered?

- What will be the outcome of the evaluation?
- Ideally set outcomes that are the same as the learning outcomes of the course

For example

- Learning outcome: students will competently communicate with patients
- Evaluation question: on course completion, do students competently communicate with patients?

Ideally evaluate outcomes that will matter to patients

Evaluation – methods

- How to collect and analyse the data
- Will methods give good answers to your questions?
- Is evaluation formative or summative?
 - Objectives oriented
 - Process oriented
 - Learner oriented

Evaluation – objectives oriented

- Set goals at the start and then evaluate to see if goals met

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- Simple

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- Inflexible
- Course organisers focus solely on achieving goals set at start in evaluation (and are not interested if its not going to be evaluated)

Evaluation – process oriented

- Evaluation starts at the very start (when the programme is just an idea) and continues during implementation through to the end

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- Comprehensive
- Formative and summative

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- Expensive
- Complex
- Lots of information gathered

Evaluation – participant oriented

- Perception of initiative from everyone's viewpoint – learners, teachers, planners
 - Ongoing
 - Triangulation a key feature
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- Captures complexity
 - Captures local context
 - Humanistic
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- Expensive
 - Subjective
 - May only apply locally

Evaluation

- Has anyone done this before?
- Can I borrow their evaluation method/tool?
- Should I ask for permission?
- Will the tool be valid and reliable in my context?
- Should I pilot? Yes
- How long should the evaluation be and how large the sample? Long enough and big enough

Evaluation

- The 'good enough' rule in evaluation design
- “The evaluator should choose the best possible design, taking into account practicality and feasibility . . . the resources available and the expertise of the evaluator.” Rossi & Freeman

Evaluation – action

- When doing the evaluation
- Make sure you have adequate time, people, funding and resources
- Stick to plan

Evaluation – report

- Decide what will go into the report in the planning process
- Report can be written up as you go
- Who is the report for? Different audiences will want different information

“The most important step in planning your evaluation is to identify for whom the information is intended.” David Cook

Evaluation – report - different audiences will want different information

- Government – quality education, costs controlled
- Dean – quality teaching, high status, research, faculty recruitment
- Teachers – reward, feedback
- Students – value for money, their voice heard, basic standards, support

Evaluation – dissemination

Internal

- Paper / electronically
- Meetings

External

- National / international meetings
- Journals

Evaluation – a driver for improvement

“No country has produced so many excellent analyses of the present defects of medical education as has Britain, and no country has done less to implement them.” George Pickering

“No matter how beautifully designed the evaluation strategy, the key question for evaluators is can the results be fed back into the system and acted upon?” David Wall

“The most important question in evaluation is `what happens next?’”
Michael Eraut

Evaluation - start again

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“Faculty development and evaluation are not activities to be undertaken only during a period of curricular reform.” LuAnn Wilkerson

Evaluation – two final pitfalls

“Evaluation of the outcomes of undergraduate medical education is a complex issue, not least because of the time lapse between the educational intervention (the undergraduate curriculum) and the overall outcome (successful performance as an independent medical practitioner).” Diana Wood

“One vivid manifestation of the low priority placed on educational research amongst the research community is the paucity of funds available for educational research, and the difficulty in obtaining funding for evaluation of educational initiatives.” Elizabeth Murray

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