State of the art - Evaluating teaching in medical schools: Why, What and How

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Outline of lecture

1. Who is interested in evaluation of medical school teaching, and why?

2. What are some innovative approaches to teacher assessment?

3. How can this be applied to actual teaching activities?

Changing paradigms of learning

Then	*Now*
❑ knowing what you should know	➔ knowing what you don't know, & how to find out
❑ 'complete' at end of formal training	➔ lifelong learner
❑ uncertainty discouraged	➔ uncertainty legitimized
❑ apprenticeship, learn from 'accepted wisdom'	➔ problems > questions > steps to learning
❑ knowledge from experience	➔ experience complemented by evidence
❑ fact- and content-based	➔ problem- and process-based

Spencer, BMJ 1999

Changing approaches to evaluation of teachers

Then

Teacher as …

- Provider of information
- Demonstrator

Now

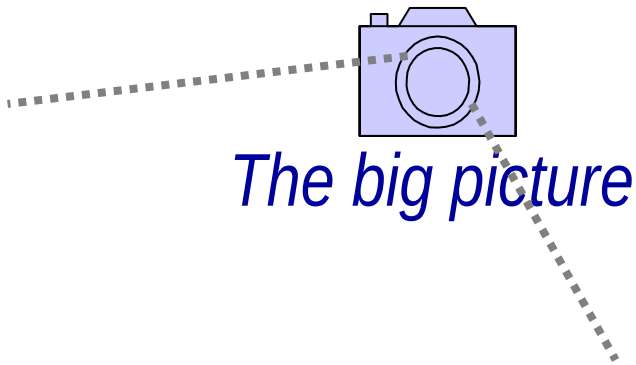
Teacher as …

- Explainer
- Facilitator
- Supervisor
- Supporter, Mentor
- Role model
- Planner
- Assessor
- Physician

1. Who is interested in teacher evaluation, & why?

Why are medical teachers accountable?

- Medical education is expensive
  - Teaching must be cost effective



- Society wants accountability
  - Need to document responsiveness to society's expectations

- Medical education has an effect on health care
  - Need for evidence of outcomes: on doctors, patients, system

Teacher >> Learner >> Outcome

Outcomes

Teacher >> Learner >> Outcome

- Teaching excellence and research productivity
- Teacher effectiveness and learning outcomes
- Good teaching and career choice of learners
- Teaching and clinical outcomes

Why we should evaluate teachers

Traditional perspectives

- Formative – for teachers
  - To identify areas for teaching improvement
- Summative – for system and teachers
  - Judges the effectiveness of teaching

To whom are teachers accountable?

New perspectives

- Learners
  - Students, residents, colleagues
- Patients
- Regulatory bodies
  - Accreditation, self-regulation
- Organizations
  - Hospitals, universities
- Funders
  - Government, insurers, students
- Teachers themselves!

Quality of instruction, (teaching process, teacher attributes), medical expertise, career choice

Professional behavior, interpersonal skills

Outcomes of education: compared to standards

Quality care, research programs, status, societal or health goals,

Cost effectiveness, value for money, political goals

Inherent satisfaction, educational innovation

Changes in:

- How we teach
- What we teach

- Who is interested in evaluation of teaching
- Why evaluation of teachers is an essential activity

- …..

2. Innovative approaches to teacher assessment

Approaches to teacher assessment

Perceptions

Process

Product

C. McGuire

Approaches to teacher assessment

1. Rating scales
2. Portfolios
3. Peer assessment
4. OSTE objective structured teaching exam
5. Teaching materials
6. Educational ‘innovations’

Perceptions

Process

Products

Rating scales

Student questionnaires, rating scales

- ‘Satisfaction’, ‘happiness’
- Generally quantitative data only
- Potential bias – evaluation may reflect preference for subject, teacher, style rather than teacher skill
- Question of quality of student critical and evaluative skills
- Potential conflict - timing of evaluation *of* students

- Recent improvements …

Effective lecturing - categories

- Clear and organized
- Case-based format
- Relevant
- Identifies main teaching points
- Engaging – active learning
- Understandable slides
- Slides – clear format

Teaching process

Copeland et al, 2000

Clinical teaching - categories

- Establishing a positive learning environment
- Control of the teaching session
- Communicating goals to the learner
- Promoting understanding & retention
- Evaluation of achievement of goals
- Feedback to learner
- Fostering self-directed learning

Teaching Process

Litzelman et al, 1998

Clinical teaching effectiveness inventory

- Establishes a good learning environment
- Stimulates independent learning
- Allows appropriate autonomy
- Balances teaching & clinical work
- Specifies what should be learned and done
- Adjusts to learner needs
- Asks questions to promote learning
- Gives clear explanations
- Adjusts teaching to diverse settings
- Coaches in clinical and technical skills
- Incorporates research data into teaching
- Teaches clinical reasoning / diagnostic skills
- Teaches effective patient management & communication skills
- Teaches principles of cost effective care

Copeland & Hewson

What students want from clinical teaching

- Increasing responsibility
- Regular observation of their work
- Opportunities to practice technical and problem solving skills
- Clear & ready answers to problems
- Seeing patients first
- Enthusiastic teachers
- Mentor role: personal, ethical, moral behaviour

Metcalfe & Mathura Med Ed 1995

Measurement principles

- Valid
- Reliable
- Feasible
- Efficient
- Acceptable
- Inexpensive
- Useful

- Multiple sources
- Triangulate measures

- Subjective & objective
- Qualitative & quantitative

Portfolios

What is a teaching portfolio?

- Documents teacher's accomplishments in field of education (also called an education portfolio)
- 'Selected information on teaching activities and solid evidence of their effectiveness'

Compare to list of grants & publications for a researcher

- Steps in developing a portfolio
  - Motivating factors
  - Documenting teaching practice
  - Reflecting

Teaching dossier or portfolio - contents

- Personal philosophy of teaching
  - Goals
  - Strategies
- Teaching responsibilities and contributions
- Teaching evaluations
  - Multiple methods, perspectives
  - Self-evaluation, and resultant changes
  - Teaching ‘products’
- Administration and educational leadership
- Innovations in education
- Scholarship in education
- Honours and awards

Faculty activities in education

Teaching ❑ Lecture ❑ Laboratory ❑ Small group ❑ Individual ❑ Clinical	**Education products** ❑ Course, curricular development ❑ Materials development ❑ Personnel development
Educational service ❑ Course, program, lab director ❑ Evaluation: learner, faculty, program ❑ Educational leadership ❑ Outreach	**Scholarship in education** ❑ Research ❑ Publication ❑ Presentation ❑ Editorial boards, reviews, consults ❑ Awards & prizes

RVU's – Relative Value Units

- Time (conduct and prepare)
- Level of faculty skill
- Value to school

} = weight

X

- Quality

X

- Category

X

- Program weight = RVU

Teaching portfolio - uses

- Support for appointment or promotion
- Support for recognition of educational excellence (awards)
- Used for formative evaluation of teaching, performance reviews

Peer assessment of teaching

In the past year have you co-taught with a peer or colleague?

In the past year have you asked a colleague to observe and evaluate your teaching?

Peer assessment of teaching

- Colleague observations and judgments
- Complements or augments student ratings, & other evaluations

Advantages:

- Different perspective from learner's
- Enhanced insight re teaching process
- Advance promotion of clinician-teachers
- Overcome bias of learner evaluations
  (if valid and reliable)
- Peer support,
- Two way learning

Disadvantages

- Not anonymous,
- Teacher anxiety,
- Time commitment
- Need for training

OSTE – Objective Structured Teaching Exam

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- Teacher interacts with a ‘standardized student’ in a standardized teaching situation
- Rapid, realistic, immediate feedback
- Specific skills broken down to parts, e.g. the teacher …
  - Stated goals clearly and concisely
  - Listened to learner
  - Encouraged learner to participate actively in discussion
  - Expressed respect for learner
  - Encouraged learner to raise questions and problems

OSTE – Objective Structured Teaching Exam

- Sample OSTE stations:
  - orienting a learner,
  - bedside teaching,
  - giving constructive feedback,
  - teaching a procedure,
  - giving a mini-lecture
- Uses:
  - Assess teaching skills
  - Enhance teaching skills
  - Assess effectiveness of curricula to improve teaching skills

http://www.residentteachers.com/oste.htm
http://www.sgim.org/am06/handouts/WF06.pdf

Teaching materials, educational innovations

Teaching materials, educational innovations

- Course development
- Curricular development
- Materials development
- Personnel development
  - Evaluation of effectiveness
  - Dissemination of findings

In summary …

- New methods of evaluating teachers
- Older methods have been improved and validated
  - More accurate
  - More practical
  - More useful
  - More acceptable

3. Application to actual teaching practice

In summary …

The fundamental purpose of evaluating teachers and teaching should be to improve the quality of medical education.

It will also:

- Improve the status of clinical teachers,
- Improve the quality of staff development,
- Improve the process of rewarding teaching.

BUT

Faculty views of faculty evaluation

- Standards & criteria are not well developed
- Current methods inadequate
- Non-uniformity of measures

- Insufficient recognition given to teaching

SO …

- Teaching must be valued in and by the institution
- There may need to be a ‘culture change’ or change in conceptions of teachers, learners and educational leaders

"If teaching evaluation is done inaccurately and in isolation the teacher may remain complacent in his ineptness or isolated in his excellence"

Rippey, 1981

A final question …

Assessment drives learning.

(only if it ‘counts’)

Does evaluation drive teaching?

(only if it ‘counts’!)