Knowledge translation in medical education: an examination of trends and challenges in evidence uptake

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Background

There is a growing body of empirical research in medical education.

We need to investigate how this research evidence interacts with educator practice.

Research Questions

1. What evidence is available for various educational approaches?

2. What educational approaches are represented on the curriculum?

3. What are the affordances *(perceived features of their practice environment. Billet, S.2001; Laurillard, 2000)* that either facilitate or constrain educators engagement with empirical evidence?

KNOWLEDGE
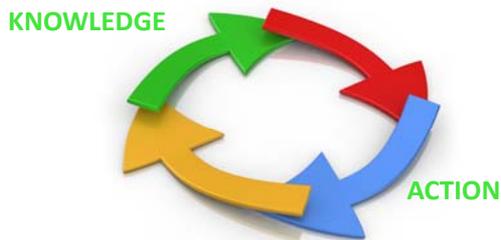
ACTION

Sequential Mixed Methods Approach (Creswell 2009)

Phase I: Umbrella Review

Reviewed 5594 abstracts and 85 full text articles.
Synthesized evidence from systematic reviews (1995-2013) for:
(1) Instructional methods;
(2) Curricular design approaches;
(3) Assessment Tools

Phase II: Curricula Analysis

Content analysis of course outlines and internal curriculum documents from 24 undergraduate medical education courses (preclinical and clinical).

Phase III: Interviews

Interviewed Medical Education Leaders (n=15)

Course (associate) course directors and senior undergraduate program administrators.

Thematic Analysis of Data.

Phase I & II Results

The majority of empirical research is concentrated on a few areas (e.g., Simulation, PBL) .

There are areas of divergence between research and practice (for example, multiple choice questions and lectures are widely used but poorly studied).

Phase III Results

Data suggest the following affordances influence medical educators' engagement with empirical evidence:

Constraining Affordances

Poor evidence quality and availability: *"There's not a whole lot on actual teaching methods, like, which methods actually work better."*

Inadequate knowledge tools: *"There isn't this tradition in medical education literature that there is in the clinical literature of regular updates of evidence."*

Work and role overload: *"I do think that I don't have enough time to really think critically about evidence because I'm busy holding meetings and writing curricula and dealing with students and so the priority isn't as high as I'd like it to be."*

Faculty change resistance: *"It's usually individuals who believe that things aren't broken, why fix them? Our course is rated very highly so that's a real concern."*

Student change resistance: *"Whenever you try to get into more self-direction usually the students balk. They want a syllabus, they want it in black and white, and they want to know what's on the exam."*

Financial and staffing resource limitations: *"We have difficulty recruiting teachers and I think it's challenging with undergraduate students because some faculty would rather work with residents."*

"There are lots of things I could fix with more money and more space."

Facilitating Affordances

Faculty development: *"We tend to [use research resources] if there is faculty development, I wouldn't use it without having a certain amount of instruction coming for me in one particular venue."*

Peer recommendations: *"I read [medical education research articles] from time to time, and to be honest with you ,it's if I have colleagues that have written something and said, hey, check this out."*

Local knowledge creation: *"We do medical education research and we use some of those findings to develop our curriculum."*

Summary & Implications

The status of knowledge translation in medical education appears weak; evidence is poorly assessed; and systemic barriers to integration exist.

Challenges for researchers and funders: Quality and availability of relevant research.

Challenges for medical schools: Organization culture in academic medicine.

Challenges for faculty development: Role implications in knowledge translation and knowledge brokering.

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