Making it Count Twice: Conducting education research within learning communities

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Disclosures

- Financial: None
- Other: Some fuzziness / confusion with the term *learning community*

Learning Objectives:

After participating in the workshop, participants:

- will have seen examples of 'quality' studies conducted within the context of learning communities
- Will know how to assess quality in medical education research
- Will be familiar with strategies that may lead to success when attempting to publish work related to curricula
- Will explore opportunities for collaboration across learning communities

Agenda:

- Overview
- Exercise 1: Assessing quality of medical education research performed within learning communities (with discussion of limitations / barriers)
- Discussion of outcomes that can be assessed by research within learning communities
- Exercise 2: Collaborating across learning communities to conduct high quality medical education research

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The Great Chicago Fire

... a conflagration that burned from Sunday October 8 to early Tuesday October 10, 1871, killing hundreds and destroying about four square miles. Though the fire was one of the largest U.S. disasters of the 19th century, the rebuilding spurred Chicago's development into one of the most populous and economically important American cities.

Wikipedia

Make no little plans; they have no magic to stir men's blood and probably themselves will not be realized. Make big plans; aim high in hope and work, remembering that a noble, logical diagram once recorded will not die.

Daniel Burnham

9 RECOMMENDATIONS FOR DISSEMINATION OF CURRICULAR SCHOLARSHIP

- Making it count twice!

1. Use a model for curriculum development that makes your work both sound and scholarly

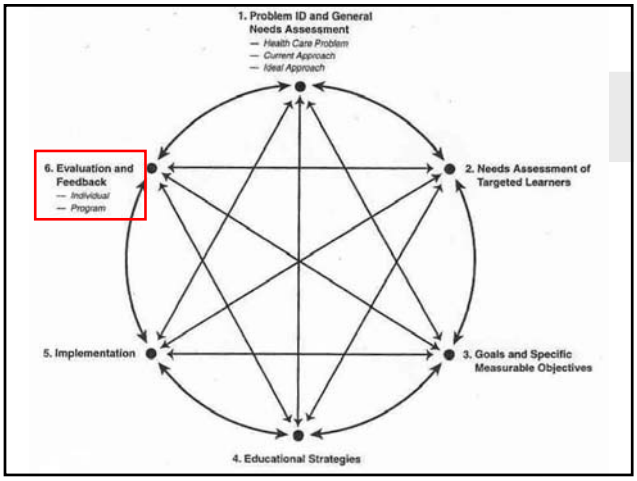
CURRICULUM DEVELOPMENT : OVERVIEW

- 1. Problem ID & Gen'l Needs Assessment
- 2. Needs Assessment of Targeted Learners
- 3. Goals & Objectives
- 4. Educational Strategies
- 5. Implementation
- 6. Evaluation & Feedback
- 7. Curriculum Maintenance & Enhancement
- 8. Dissemination

(Kern DE, Thomas PA, Howard DM, Bass EB. Curriculum Development for Medical Education: A Six-Step Approach. Baltimore (MD): Johns Hopkins University Press; 1998.)

2. Think Ahead

- Start planning for scholarship / publication <u>at the same</u> time that you are beginning to plan the curriculum.



STEP 6: EVALUATION

Reasons for it:

- To determine if goals and objectives met
- To provide information for improvement
- To assess individual achievement
- To satisfy external requirements (e.g., ACGME)
- To document accomplishments of curriculum developers
- To maintain and garner support
- To serve as a basis for presentations/publications

- Design / work on scholarly projects that will be publishable and interesting regardless of the outcome

3. Seek Institutional Review Board (IRB) Approval Early

- Do not assume educational research is exempt.
- Ask your IRB about your proposed project early.

4. Seek Funding/Resources

WHY?

- Protect time
- Improve quality*
- Add to promotion portfolio

*Reed DA, Cook DA, Beckman TJ, Levine RB, Kern DE, Wright SM. Funding is Associated with Quality in Medical Education Research. JAMA. 2007;298:1002-9.

WHERE?

- Get on list for weekly email notification service
- Know government funding sources
- Know about selected private foundations that fund medical education
- Contact relevant specialty or professional organization(s)
- Know about grants offered by your own institution
- Negotiate for resources if asked to develop / revise / assume responsibility for curriculum

5. Strive for the highest quality

Medical Education Research Study Quality Instrument (MERSQI)

Domain	Item	Item Score	Domain Score
Study Design	1. Study Design		
	O Single group cross-sectional or post-test only	1	
	O Single group pre and post-test	1.5	
	O Non-randomized, 2 group	2	
	O Randomized controlled experiment	3	___ / 3
Sampling	2. Institutions		
	O Single institution	0.5	
	O Two institutions	1	
	O More than two institutions	1.5	
	3. Response rate		
	O Response rate <50% or not reported	0.5	
	O Response rate 50-74%	1	
	O Response rate ≥75%	1.5	___ / 3
Type of Data	4. Type of Data		
	O Assessment by study subject	1	
	O Objective measurement	3	___ / 3

Medical Education Research Study Quality Instrument (MERSQI)

Domain	Item	Item Score	Domain Score
Validity	5. Internal structure		
	O Reported	1	
	6. Content Validity		
	O Reported	1	
	7. Criterion Validity		
	O Reported	1	___ / 3
Data Analysis	8. Appropriateness of Analysis		
	O Inappropriate for design or data	0	
	O Appropriate for design or data	1	
	9. Sophistication of Analysis		
	O Descriptive only	1	
	O Beyond descriptive	2	___ / 3
Outcome	10. Outcome		
	O Satisfaction, attitudes, perceptions, opinions	1	
	O Knowledge, skills	1.5	
	O Behaviors	2	
	O Patient/ health care outcome	3	___ / 3

6. Seek Collaborators

- Assemble a team that:
  - has the appropriate combination of expertise
  - shares the same goals / vision
- Try to include collaborators from outside your institution
  - improves generalizability
- Why: better product, division of labor, more fun

7. Know Where to Submit

- Know which journals publish educational/curricular articles.
  - Know whether they have published articles like yours before
- Pick first, second, third, and fourth choices.

- Manuscripts should get rejected before being accepted
- Know the pecking order in terms of "citation index"
- Never let a rejected manuscript stay with you for more than 3 weeks
- Don't get too bummed out by setbacks, it a long journey

8. Know How to Prepare Curriculum-Related Manuscripts for Submission

JGIM Education Issue Experience (2004)

- 60 curricular (145 total) manuscripts submitted
- 51 (85%) sent for review
- 16 (27%) revision invited

- 11 of 60 (18%) of those submitted accepted
- 11 of 16 (69%) of invited revisions accepted

Major Concerns Expressed in Editors' Letters

- Evaluation incomplete or inappropriate (48%)
  - Needs stronger or more outcome measures
- Intervention poorly described (27%)
- Work not established as innovative (25%)
- Poorly referenced / placed in literature (17%)
- Writing style / didn't follow journal rules (17%)
- Inadequate needs assessment (17%)
- Objectives not clear (13%)

9. Seek Mentorship

- For curriculum development
- For seeking funding / grant writing
- For publishing

Clinician-educators need mentors!!

- Find a mentor
- Be explicit with her and tell her what you want/expect from her (how she can be most helpful to you).
- It may be preferable to have a "very good" mentor who is available and genuinely committed to you, than having an "excellent" mentor who is too busy for you.
- Multiple mentors may be preferable

Take Home Message

- Medical education research (particularly for content areas such as learning communities) is like Chicago on October 11, 1871.
- It is now time to "make big plans and to aim high".

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Collaborating across learning communities to conduct high quality medical education research

You've just been awarded $1M to study your LC

- Please consider:
  - Studying the existing LC versus some new curricular component
  - Hypothesis(es)
  - Specific aim of the research
  - Outcomes to be assessed
  - Study designs to be employed / sample / settings
  - Hopefully the $1M will allow you look past the potential difficulties and limitations