

Establishing and Growing Educational Research: Practical Steps

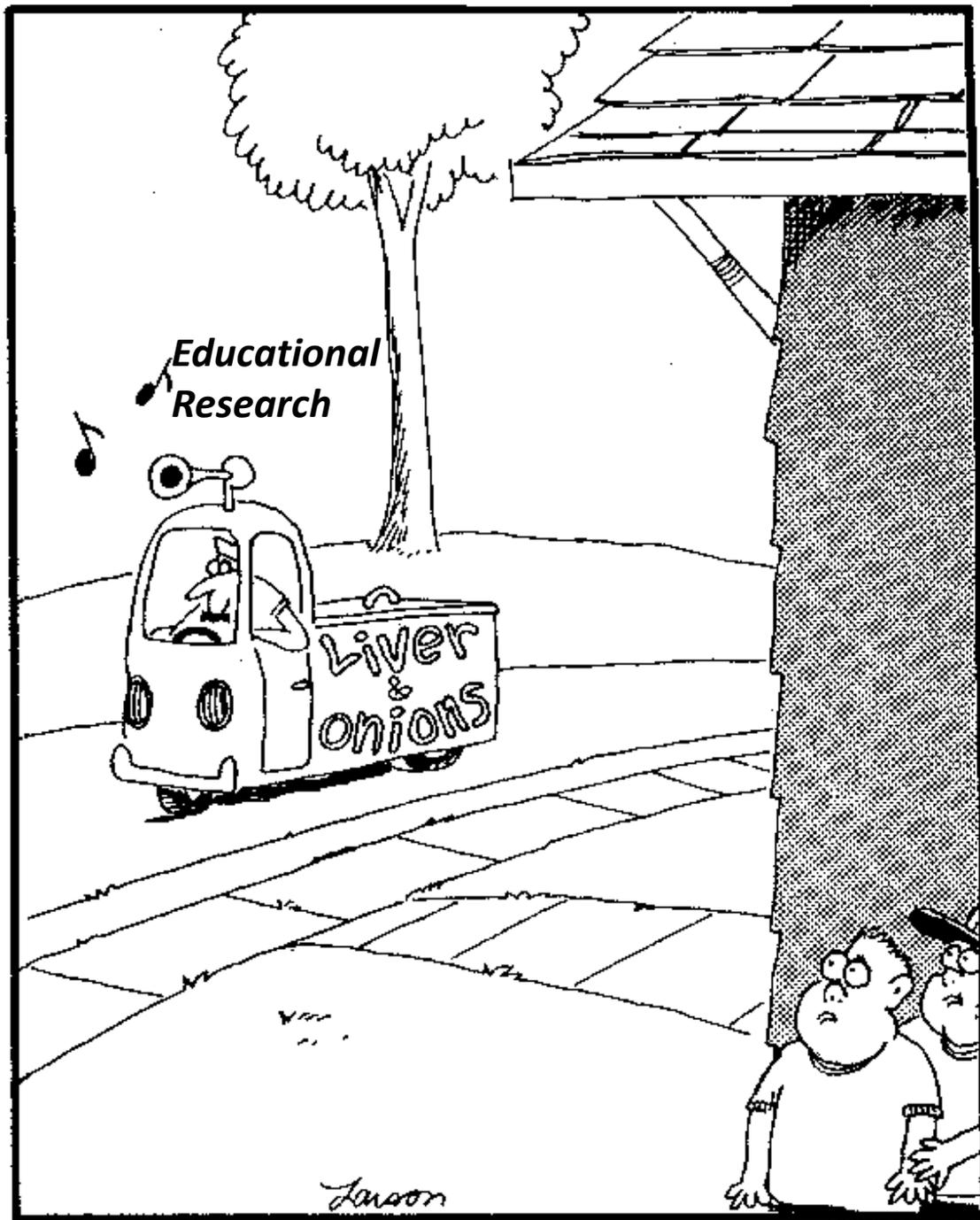
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Disclosure – Conflict of Interest

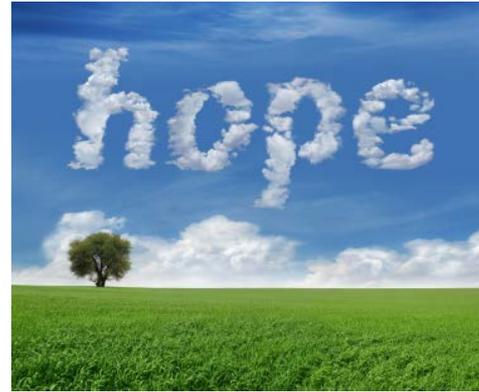
- The authors have no conflict of interest in relation to this presentation.



*Educational
Research*

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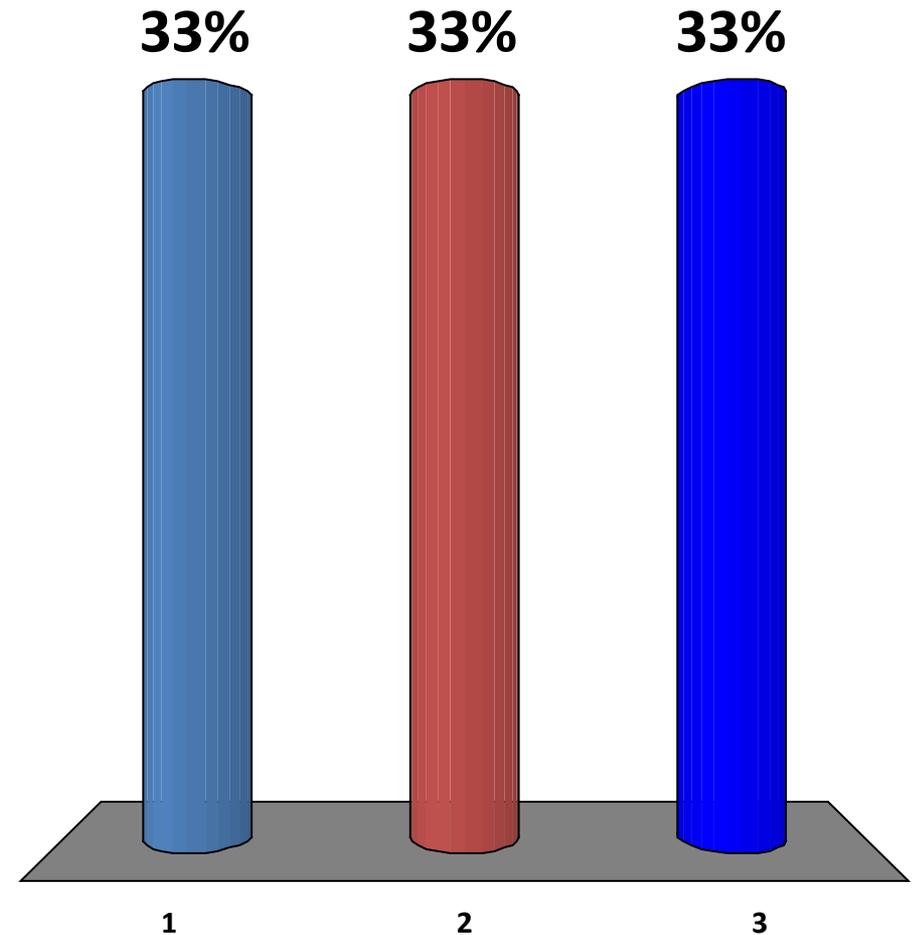


If you don't all ready, you will:

- View educational investigation as an interesting and rewarding form of scholarship
- Go beyond perceived barriers and focus on exceptional opportunities in educational research
- Share (publish!) the unique scholarly things you are likely already doing
- Begin collaborating with other educators both within and outside of your program to answer “best practices” questions in Anesthesiology education

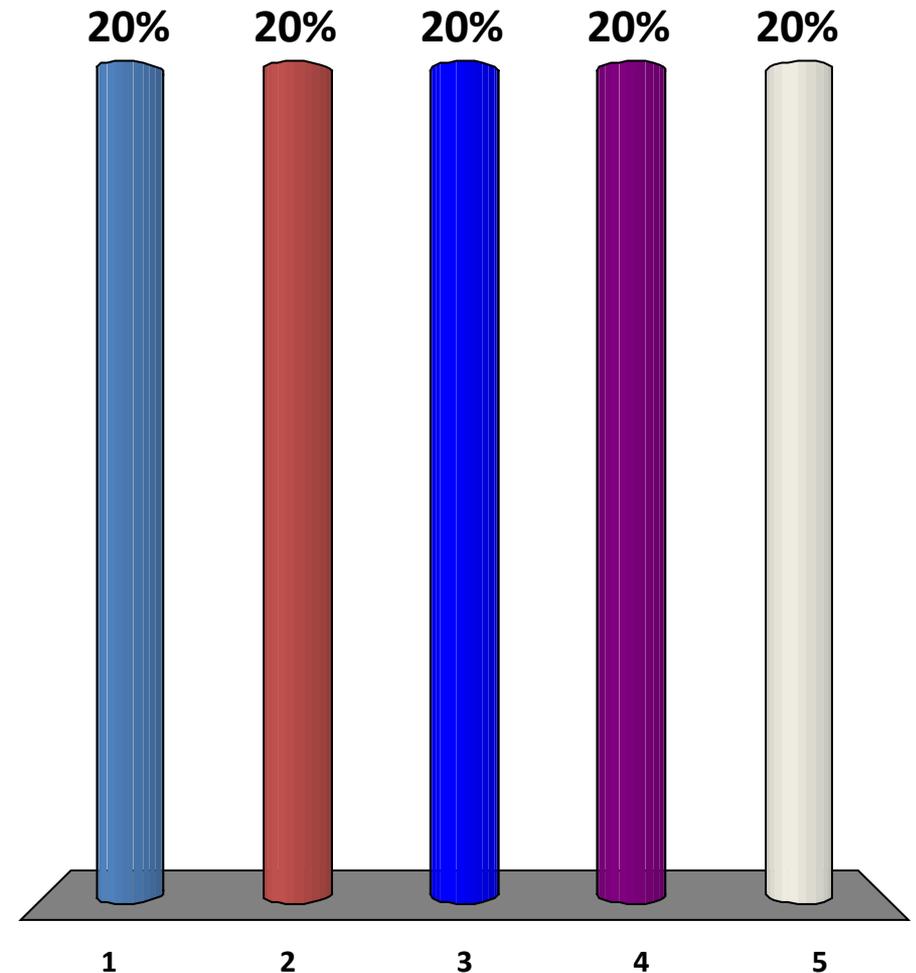
Do you have experience in publishing educational research?

1. Yes
2. No
3. In process (I'm working on it)



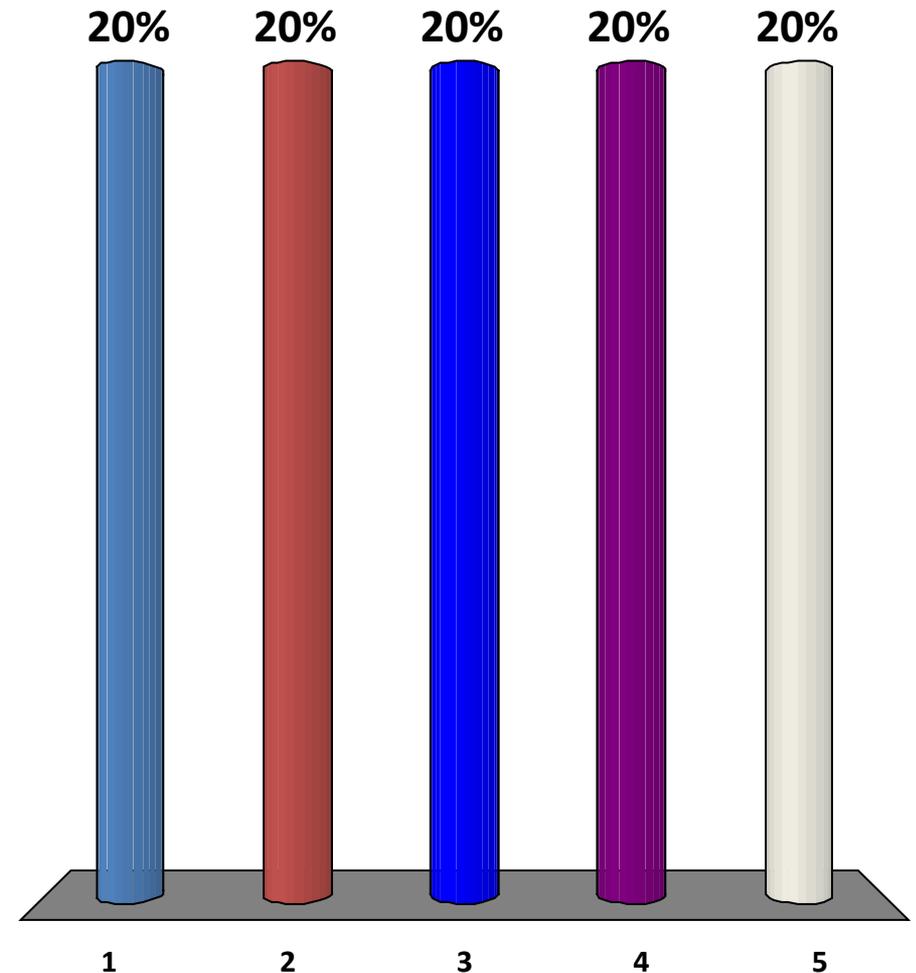
How would you describe your success in publishing educational research?

1. Very successful
2. Successful
3. A little bit
4. Not as much
5. Complete failure!



In your experience, which of the following do you believe is the **GREATEST** barrier to educational research?

1. Funding
2. Time
3. Training
4. "No one is interested"
5. Other



Why Educational Research/Scholarship?



- Passionate about education
- Evidence-based education
- Faculty/resident interests
- Non-clinical time, funding, IRB, study cohort, immediate local application
- Faculty advancement
- Development: Resident senior projects and recruitment to academia

Areas of Potential Scholarship in Resident Education

1. Resident Selection Process
2. Evaluation
3. Curriculum
4. Teaching Methods
5. Innovations
 - ✓ *Technology*
 - ✓ *New Rotations*
 - ✓ *Simulation*
6. *Outcomes*



Educational Research: The Early Stages of Development



I. Determine why YOU are interested

- Are there questions you would like to answer?
- Passionate about education
- Desire to collaborate with colleagues
- Professional advancement and desire to perform scholarly work

II. Get others around you involved and talk with those who are doing educational research-- Need Mentor?

Educational Research: The Early Stages of Development



III. Determine what you can accomplish “now”

- Educational research cannot and should not always utilize controlled experimentation as the only method of preference.
 - Narrative descriptions, letters, surveys, pre-experimental studies, editorials, etc.

Examples:

*Fragneto RY, DiLorenzo AN, Schell RM, Bowe EA. **Evaluating practice based learning and improvement: Efforts to improve acceptance of portfolios.** J Graduate Medical Education 2010*

*Schell R, Bowe E, Fragneto R. **Education in anesthesiology should be evidence-based.** Anesthesia and Analgesia 2008*

Educational Research: The Early Stages of Development



III. What can you accomplish now? (cont)

- Are you doing anything unique?
Generalizable? Could help others?
 - New curriculum
 - Interesting teaching technique(s)
 - Innovative use of technology

What Can You Accomplish Now?

Research Examples (1)

- Rebel A, Hassan Z, Boral L, Lin Y, DiLorenzo A, Schell R. **Initial results of a structured rotation in hematology and transfusion medicine for anesthesiology residents.** Journal of Clinical Anesthesia 2011
- Schell R, DiLorenzo A, Fragneto R, Bowe E. **Anesthesiology resident personality type correlates with faculty global assessment of resident performance.** Journal of Clinical Anesthesia 2012
- Hassan Z, DiLorenzo A, Sloan P. **Teaching clinical opioid pharmacology with the human patient simulator.** Journal of Opioid Management 2010
- Klimkina O, DiLorenzo A, Fragneto R, Schell R. **Implementing a required transesophageal echocardiography rotation in an anesthesiology residency: Educational curriculum, resources, and evaluation methods.** Submitted to Journal Graduate Medical Education Oct 2012

Educational Research: The Early Stages of Development



IV. Don't get discouraged by initial lack of resources

- Faculty volunteering time and resources = majority of education research
- Frequently your “subject(s)” = your learners or your training program
- Educational studies often given IRB exemptions or expedited reviews

Educational Research: The Early Stages of Development



V. Focus on early successes and encourage other faculty/residents to join you

- Submit abstracts at meetings (i.e. SEA, ACGME, IARS, ASA, etc) and consider submitting initial scholarly work to meetings more likely to accept
- Authors should attend meetings and discuss results with others, develop new ideas, form collaborations
- Encourage residents to consider an educational research project for senior scholarly activity requirement. Medical Students?

What Can You Accomplish Now?

Research Examples-Abstracts

- DiLorenzo A, Schell RM, Sardam S, Bove E, Dority J. **The use of a wiki to enhance anesthesiology resident education.** Abstract SEA 2010
- DiLorenzo A, Schell R, Sardam S, Bove E. **The use of podcasting to supplement in-training examination review sessions.** Abstract SEA 2010
- Schell RM, Fragneto R, Bove E, DiLorenzo A, Sardam S, Melguizo-Castro. **Anesthesiology residents' readiness for self-directed learning does not correlate with performance on standardized examinations.** Abstract ACGME 2009
- Chau D, Bove E, Brown R, DiLorenzo A. **Implementation of a comprehensive but simple method to manage and track resident knowledge and skill acquisition during pediatric anesthesia training: Impact on first graduating class.** Abstract IARS 2012

What Can You Accomplish Now?

Research Examples: Medical Student/Resident

- Schell R, Reynolds J, Fragneto R, DiLorenzo, A, Li H, Bowe E. **First impression during the residency interview correlates with final rank list position.** Abstract IARS 2011
- Reynolds J, Schell R, DiLorenzo A, Fragneto R, Hatton K, Bowe E. **Faculty evaluation of anesthesiology residents: Resident satisfaction and faculty promotion is more important than quality constructive formative feedback.** Abstract UK Center for Clinical and Translational Science 2011
- Pinault L Hassan Z, DiLorenzo A. **Using the human patient simulator to teach medical students and interns how to effectively deal with an obstructive physician in a crisis situation.** Abstract SGEA 2012

Educational Research: The Early Stages of Development



V. Select target journals for publication

- Submit initial educational scholarly work where success in publication is more likely:
 - *Journal of Graduate Medical Education*
 - *Medical Teacher*
 - *Teaching and Learning in Medicine*
 - *Medical Education*
 - *Simulation in Healthcare*
- Celebrate successes



Educational Research: The Later Stages of Development



I. Consider obtaining formal training in medical education and research

- Social science methodology
- Qualitative research
- Collaboration with education specialists
- Advanced degrees

Udani A, Macario A. Master's programs in education available in the US for faculty interested in developing their pedagogy skills. AUA Newsletter (in press)

Educational Research: The Later Stages of Development



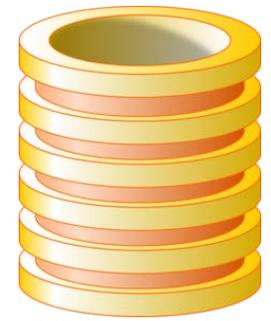
II. Work with or hire an education specialist

- Help with research design
- Statistics
- Facilitate IRB process
- Help with faculty development

III. Develop databases and collect data for longitudinal study

- Examples: Personality profiles (MBTI), graduate survey results, selection process scoring, archiving of evaluations

Databases and Ongoing Research Projects: Examples



- Schell R, Bowe, E, Fragneto R, Hessel E, DiLorenzo A. **Individualized learning plans and self assessments.** 2008-present
- Fragneto R, Schell R, Bowe E, Hatton K, DiLorenzo A. **Is there a second chance to make a first impression? Blink scores and their correlation with final placement on a residency application list.** 2010-present
- Rebel A, Schell R, Hassan Z, Fragneto R, DiLorenzo A. **Anesthesia olympics as a method for assessing resident knowledge and skills.** 2011-present
- Rebel A. Sloan P, Fragneto R, Hassan Z, Schell R, Bowe E, DiLorenzo A. **Use of the simulator to assess transfer of care using a rapid response model.** 2012-present
- MBTI Personality Profile database. 2008-present

Educational Research: The Later Stages of Development



IV. Develop collaborations with others

- Within department
- Within your institution
- With other institutions



Generalizability

Larger sample sizes

Expertise

Fun!

Educational Research: The Later Stages of Development



V. Begin to branch into more involved qualitative research, quantitative research, and outcomes research



V. Look for funding for your research

- Stemmler, FAER, others
 - Example: “The use of the human patient simulator to assess transfer of care using a rapid response model.” Funded by Southern Group on Educational Affairs 2012

VII. Target high impact journals

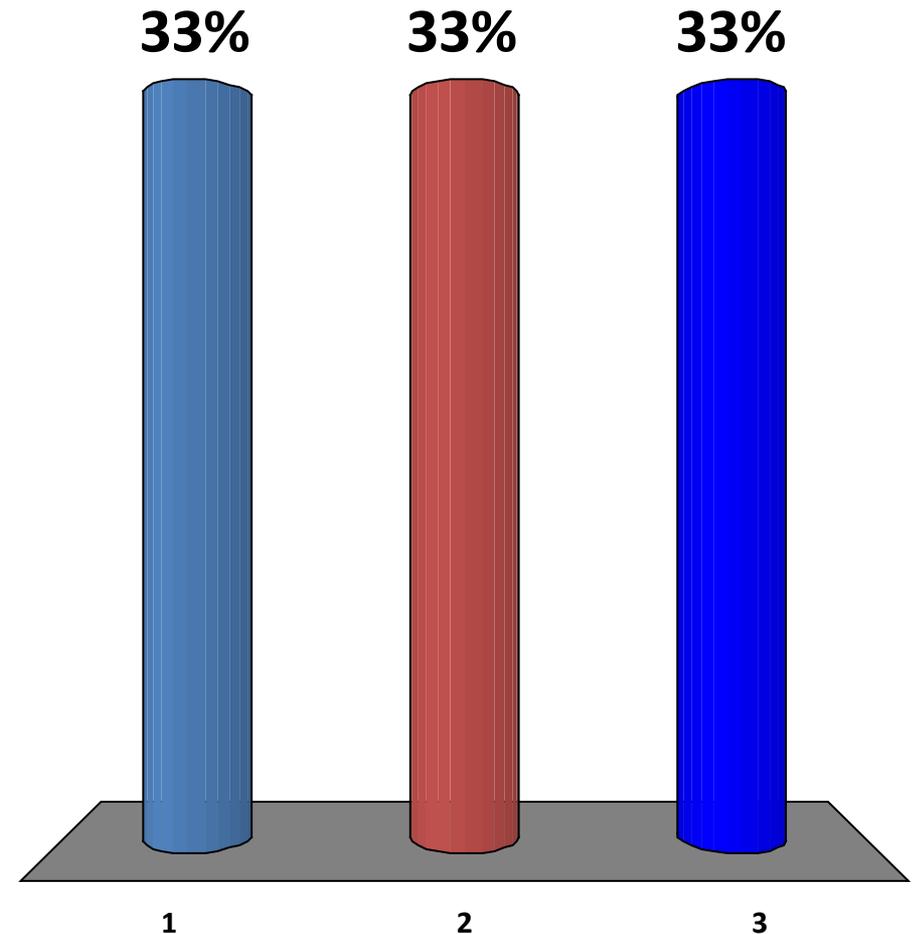
Educational Research: The Later Stages of Development



- Help teach and mentor others who are interested in educational research
- Consider forming a faculty development program in medical education research in your department/institution
- Formation of an educational research group in your department

Are you interested in participating in collaborative educational research?

1. Yes – right now – sign me up!
2. No – this stuff isn't for me
3. Maybe in the future – let me think about it



Collaboration

***Outcomes
educational
research***



***Faculty
development
program in
educational
research***

***Study best
practices in
anesthesiology
education***

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