

Educational Scholarship: Are You an Educator or a Researcher?

Many family medicine educators conduct innovative educational projects that they present at STFM meetings, but less than half of these presentations are published as educational research.^{1, 2} Most faculty want to publish their work, yet many say they are too busy with clinical and educational activities to do research. Fortunately, many teaching interventions can lead to a publication if a faculty member systematically approaches every curriculum project as an educational research study with appropriate methods and data-gathering strategies.

This article suggests several strategies for converting curriculum projects into educational research studies. These strategies include working in teams, reviewing the literature, formulating a research question or hypothesis when writing goals and objectives, using teaching/learning methods that best answer your research question or test your hypothesis, and obtaining evaluation data at the highest possible level on the continuum that runs from learner satisfaction to changes in practice.^{3, 4}

Work in Teams

Collaborate with colleagues to share work and improve projects. Use team members' strengths to plan their contributions; teams need writers and people with statistical expertise, but team members who teach the intervention also play an important role. Ensure your team also has a "completer-finisher" who keeps the project on track by setting and meeting deadlines.

Review the Literature Before Beginning a Project

Reviewing the literature informs you about current developments related to your project, sparks ideas for methods, and identifies gaps that your project will address. Unfamiliarity with the literature, weak methods, and lack of originality are common reasons why reviewers reject manuscripts.⁵

Formulate a Research Question or Hypothesis

Your question or hypothesis is a natural extension of your project goals and objectives. How exactly will your intervention change students' knowledge, skills, and/or attitudes? Which evaluation method effectively demonstrates that change?

Plan your Methods to Best Answer Your Question or Support Your Hypothesis

Match your evaluation method to your objectives. For example, directly observe students to assess a psychomotor skill (e.g., suturing a laceration on a plastic skin model) rather than use a multiple choice test.

Evaluate at the Highest Possible Level

Kirkpatrick³ described four levels of evaluation, as summarized in Table 1 along with sample evaluation methods.⁴ Each level is more difficult to achieve, but higher-level data are more publishable.

Summary

Academic faculty are busy people. Using the above strategies for converting curriculum projects into educational research studies can increase the likelihood of conducting curriculum projects that reach publishable quality. Educators can be researchers too!

Table 1
 Kirkpatrick's Four Levels on Which to Focus Evaluation*

Level	Description	Sample Evaluation Methods**
Level 1	Learner's reactions	Interview, focus group, survey, course evaluation
Level 2a	Modification of attitudes and perceptions	Interview, focus group, survey, reflective writing exercise, Web-based discussion thread, portfolio
Level 2b	Acquisition of knowledge and skills	Direct observation, multiple-choice test, essays, case studies, short-answer questions, standardized patient cases, procedure logs, portfolios
Level 3	Change in behavior	Direct observation, patient/procedure log, chart review, standardized patient case
Level 4a	Change in practice	Direct observation, chart review, clinical outcome measures (eg, adherence to guidelines), patient satisfaction data
Level 4b	Benefits to patients or clients	Achievement of quality indicators, direct measurement of patient outcomes, chart review, patient satisfaction data

* Adapted by Barr et al 4

** Sample methods added by Dobbie and Tysinger, 2007

References

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