

ESSENTIAL SKILLS IN EDUCATIONAL RESEARCH

Searching and Evaluating the Literature

This workshop is intended for MCG Faculty, Fellows and Residents who want to learn how to effectively search the published educational literature and to evaluate the value of those searches.

After participating in this workshop, learners will be able to:

1. Formulate an effective approach to searching educational literature;
2. Conduct a search using relevant MeSH headings;
3. Communicate effectively with a research librarian;
4. Evaluate the search results using specific review criteria.

Formulating Research Questions

In this workshop, participants will brainstorm research ideas, write, and refine a measurable research question. You will discuss when IRB approval is required for their study. The basics of research design will be discussed and applied to their selected research question.

After participating in this workshop, learners will be able to:

1. Write a FINER (feasible, interesting, novel, ethical, relevant) educational research question;
2. Specify an educational research area of interest;
3. Evaluate whether they need IRB approval for their study;
4. Select the correct design for their research question.

Study Design & Design Validity

In this session, participants will build foundational skills in evaluating and selecting appropriate study designs, that are critical to conducting high-quality educational research. Through interactive analysis of published examples, participants will explore how research questions guide design decisions and how those decisions affect the strength and credibility of findings. Attention will be given to identifying threats to validity and ensuring alignment between purpose, method, and outcome.

At the end of this session, participants will be able to:

1. Identify common types of study designs used in educational research;
2. Evaluate the alignment between research questions and study design;
3. Discuss key threats to internal and external validity;
4. Assess whether design choices support valid and reliable conclusions;
5. Determine if appropriate controls and sampling strategies were used;
6. Critically appraise the strengths and limitations of a given study design.

Overview of IRB

*** Include educational research review**

This session will provide an essential overview of the Institutional Review Board (IRB) process, with a specific focus on how it applies to educational research. Participants will learn the ethical principles guiding human subjects research and how these principles

translate into IRB requirements. Special attention will be given to the unique aspects of reviewing educational research, including classroom-based studies, program evaluations, and minimal-risk research involving students or faculty. Through case examples and discussion, attendees will gain confidence in preparing IRB submissions that meet both ethical and regulatory standards.

At the end of this session, participants will be able to:

1. Describe the purpose and role of the IRB in protecting human subjects;
2. Identify key ethical principles guiding educational research;
3. Understand what types of educational research require IRB review;
4. Differentiate between exempt, expedited, and full board review in the context of educational studies;
5. Prepare IRB submissions that clearly address risk, consent, and confidentiality in educational settings;
6. Anticipate common IRB concerns and how to address them proactively.

Overview of Research Methods (Mixed, Quantitative, Qualitative)

This session introduces participants to the foundational research methodologies used in educational research: quantitative, qualitative, and mixed methods. Participants will explore the philosophical underpinnings, data collection strategies, and analytic approaches associated with each method. Through comparison of real-world examples, attendees will examine how different methodologies answer different types of research questions, and how to choose the most appropriate method to achieve meaningful and valid results in healthcare education settings.

At the end of this session, participants will be able to:

1. Differentiate between quantitative, qualitative, and mixed methods approaches;
2. Describe the strengths and limitations of each methodology in educational research;
3. Match research questions to appropriate methodological approaches;
4. Identify common data collection techniques associated with each method;
5. Understand the basics of data analysis for each approach;
6. Evaluate how methodological choice impacts study outcomes and interpretation.

Qualitative Data Analysis

This session provides a practical introduction to the principles and processes of qualitative data analysis in educational research. Participants will learn how to move from raw data such as interview transcripts, open-ended survey responses, or observation notes to meaningful themes and insights. Through hands-on activities and examples, the session will cover coding strategies, theme development, and approaches to ensure rigor and trustworthiness in qualitative findings. Participants will also explore tools and techniques for organizing and analyzing qualitative data effectively.

At the end of this session, participants will be able to:

1. Describe the key steps in qualitative data analysis;
2. Apply basic coding techniques to qualitative data;
3. Distinguish between descriptive and interpretive coding;

4. Develop preliminary themes from coded data;
5. Identify strategies to ensure trustworthiness (credibility, dependability, confirmability);
6. Understand how to present qualitative findings in a clear and compelling manner.

Preparing for Statistical Consultation and Intro to SPSS

This workshop helps participants prepare their data for analysis and be able to answer questions about their data that a statistician will likely ask when providing consultation.

At the end of the workshop the participants will be able to:

1. Collect data;
2. Set up data files;
3. Enter data into data files;
4. Check and clean data prior to analysis;
5. Compare my sample to my population;
6. Address statistical issues discussed during consultation with a statistician (e.g., Type I & II errors, power, effect sizes).

Measuring Educational Outcomes with Reliability and Validity

This workshop introduces participants to the principles of score reliability and validity, using a combination of didactics and review of educational research projects. The workshop is divided into two parts with group exercises designed to reinforce understanding of the main principles.

After participating in this workshop, learners will be able to:

1. Identify three types of reliability (inter-rater, test-retest, and internal consistency);
2. Match types of reliability with appropriate statistical measures;
3. Describe the relationship between reliability and validity;
4. Describe multiple forms of evidence for validity;
5. Select an approach to reliability and validity assessment for a particular study.

Program Evaluation and Evaluation Research

This workshop introduces participants to fundamental principles of educational program evaluation, and provides participants with a strategy for developing an evaluation plan.

After participating in this workshop, learners will be able to:

1. Describe program evaluation and its purposes;
2. Identify barriers to program evaluation;
3. Identify models used in evaluation;
4. Describe the steps of an evaluation;
5. Develop an evaluation plan.

Preparing Educational Research for Publication

In this session, the skills of scholarly writing will be explored through the lens of analyzing a manuscript that was accepted for publication. The participants will examine review criteria that are used by healthcare education journals and apply them to a sample manuscript. In

discussing scholarly writing the participants will make a decision about the type of feedback they would give to the authors of the sample paper.

At the end of this session, participants will be able to:

1. Identify the components of a scholarly publication;
2. Discuss how to frame a problem statement;
3. Identify an effective Research Question;
4. Discuss whether the Design/method is appropriate to the question;
5. Discuss whether the authors have applied the best data collection methods to the appropriate sample;
6. Understand the Results section and how to present results in a clear manner.