

Introduction to Educational Research

As a student, teacher, or administrator, consider how many times you have heard, “evidence-based practice” or “according to the research.” It seems that every new idea in education is research-based, but what does that really mean? This overview is a summary of important concepts and considerations related to research in education.

What is Educational Research?

A cyclical process of steps that typically begins with identifying a research problem or issue of study. It then involves reviewing the literature, specifying a purpose for the study, collecting and analyzing data, and forming an interpretation of information. This process culminates in a report, disseminated to audiences, that is evaluated and used in the educational community. (Creswell, 2002)

In less comprehensive terms, educational research is an organized approach to asking, answering, and effectively reporting a question.

Why Educational Research?

Educators need to be consumers (and producers) of research. Creswell (2002) notes the following reasons, describing the various purposes of educational research:

1. Improve Practice

Research can suggest ways of improving practice that have been verified with many applications and by many different types of people, which is difficult for practitioners.

2. Add to Knowledge

Research can add to what we know about how people learn and what we can do help facilitate the learning process.

3. Address Gaps in Knowledge

Research can address areas in which little is known, like perhaps the effects of online versus traditional classroom learning.

4. Expand Knowledge

Research can allow us to extend what we know in ways we never conceived.

5. Replicate Knowledge

Research can act as a test to verify previous findings.

6. Add Voices of Individuals to Knowledge

Research can add an important perspective for different learning types. Much of the educational research prior to the Eighties is based on able, white, middle-to-upper class males. This is certainly not reflective of our increasingly heterogeneous students, and research helps revise theory and practice to reflect different student needs.

These are only a few of the many reasons research is important, particularly to educators. In an increasingly data-driven society, it is vital that educators know how to locate, find, and interpret research on their own. Further, educators need to be able to conduct quality research to examine issues within their own contexts.

What are the Basic Types of Research?

Briefly, get used to using the following words: *quantitative, qualitative, network analysis, and mixed methods*. We will review each on this site, but for now, consider these brief descriptions:

1. **Quantitative Research (QUANT)**—descriptive and inferential statistics.
This type of research design is best for “What?” questions.
2. **Qualitative Research (QUAL)**—descriptive and thematic analysis.
This type of research design is best for “How?” and “Why?” questions.
3. **Mixed Methods (MIXED)**—integrated, synthesis, and multi-method approaches.
This type of research design is good for any questions you can think of, particularly those that can’t be answer easily with numbers alone. Consider the “best” way to evaluate student achievement, for example.

How is Research Distinguished?

The final emphasis point in this brief introduction is fundamental your understanding as a soon-to-be consumer/producer of research. Where most introductory students struggle is in distinguishing **primary and secondary sources**. We’ll return to this later, but to be sure we are clear from the beginning. . .

Empirical research implies that the study is original and stresses systematic observation. Journal articles and other types of peer-reviewed sources (such as academic [conference papers](#)) are the main venue for empirical research. These first publications of empirical research are also referred to as **primary sources**. In academic settings, you are generally only to use primary sources. Your best source for journal articles is a [research database](#).

If nothing else, you can visually tell that periodicals, such as newspapers, magazines, online weekly reports (such as [Education Week](#)), or even text books, dictionaries, and encyclopedias (like [Wikipedia](#)) are much different. The usual tip is that these types of publications have advertisements, where journal articles generally do not. These are all **secondary sources**. You might see references to research, but the actual report is in a journal article, as above. You are generally not to use secondary sources. [This chart](#) will help.