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Module 3

Evaluation Design

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Chapter 1



Evaluation Design Options and Considerations



Evaluation Design¹

- Evaluation design refers to the structure, processes, and methods used to answer your evaluation questions.
- An evaluation design should be informed by the program
 - goals,
 - logic model,
 - evaluation questions,
 - available resources, and
 - funding requirements.

Evaluation Design Categories

- Four broad categories of evaluation design:
 - Descriptive designs
 - Correlational designs
 - Quasi-experimental designs (QEDs)
 - Randomized controlled trials (RCTs)
- Evaluations often involve multiple design categories.

Descriptive Designs

- A descriptive design can be used to
 - document how a program works,
 - provide feedback on implementation,
 - identify barriers to program success,
 - help determine the best outcomes for assessing program effectiveness, or
 - help clarify program objectives.

AMMP! Example: When to Use a Descriptive Design

- Example descriptive design questions include the following:
 - How many volunteer tutors were trained to implement AMMP!?
 - How many tutoring hours, on average, did students receive?
 - What are the characteristics of students and volunteers participating in the program?
- A descriptive design will help in understanding whether enough tutors were trained, whether those tutors are meeting with students, and whether the target population of students is being reached.

Correlational Designs

- Correlational designs can be used to
 - document how program participation relates to outcomes of interest;
 - understand associations between various subgroups and changes in participants' knowledge, skills, and behaviors; or
 - determine how differences in implementation are associated with intended outputs.

AMMP! Example: When to Use a Correlational Design

- Example correlational design question:
 - Did the tutors who participated in AMMP! training demonstrate an increased knowledge of effective techniques?

Quasi-Experimental Designs and Randomized Controlled Trials

- Both QEDs and RCTs can be used to
 - compare the outcomes of a treatment group (who receive the intervention) to the outcomes of a comparison group (who do not), and
 - help ensure that any changes observed in the treatment group are due to the intervention and not to some other cause.
- How are QEDs and RCTs different?
 - QEDs involve creating equal groups through matching or other statistical adjustments.
 - RCTs involve randomization, a process like a coin toss, to assign individuals to the treatment or comparison group.

AMMP! Example: When to Use a Quasi-Experimental Design

- An example QED question:
 - Did AMMP! have an effect on grade 9 students' readiness for high school math as measured by a math placement test?
- In a QED like this one, the evaluation team can use existing data from schools that did and did not implement AMMP!, without the random assignment needed in an RCT. However, as you will explore further in chapter 3, the evidence from a well-designed, well-executed QED is not as strong as the evidence from a successful RCT.

AMMP! Example: When to Use a Randomized Controlled Trial

- An example RCT question:
 - Did participation in AMMP! cause a decrease the number of community issues among students in the program?

Evaluation Design: Matching Activity

Now, test your understanding of the design categories.

- Complete the matching activity.
- Additional information about strong evaluation and research designs can be found on the What Works Clearinghouse website (<https://ies.ed.gov/ncee/wwc/Multimedia/18>).

Evaluation Design: Matching Activity

Directions

Match each of the examples below with one of the four design categories:

- A. Descriptive design
- B. Correlational design
- C. Quasi-experimental design (QED)
- D. Randomized controlled trial (RCT)

Examples

1. A state education agency offers training to schools on positive behavior interventions and supports (PBIS) in an effort to decrease rates of student suspensions. Thirty schools volunteer and attend the training. These schools implement schoolwide PBIS systems the following year, with ongoing support from the state education agency. The agency wants to determine whether the training and subsequent implementation of schoolwide PBIS were successful. The agency compares the suspension rates of the 30 participating schools to 30 schools that did not participate but are statistically similar in racial/ethnic minority composition, socioeconomic status, and prior suspension rates.
2. A school district receives a free year subscription to an online program that provides curricular materials in literacy. After the free year has concluded, district leaders evaluate the program to determine whether to pay for a subscription. The leaders conduct a literature review to identify and summarize the results of previous studies of the program and similar programs. They also administer a survey to assess how frequently reading teachers used the materials over the past year as well as how the teachers perceive the value of the program. Finally, the leaders conduct a focus group with a small sample of teachers to discover how they incorporated the online literacy materials into classroom instruction.



Combining Evaluation Designs

- Comprehensive program evaluation usually involves multiple evaluation designs.
- The early stages of an evaluation may generate more ideas. In these instances, a descriptive design may be most appropriate.
- The later stages may provide stronger evidence of the impact of a program. At this point in an evaluation, a QED or RCT may best address the evaluation questions.

AMMP! Example: Combining Evaluation Designs

A district conducts a needs assessment to better understand how to support struggling students in math (descriptive design).

Data show the school where AMMP! is being implemented sees greatest improvement (correlational design).

The district uses a lottery to determine treatment and comparison schools for a pilot program (RCT).

The district compares the results of all participating schools to the results of nonparticipating schools, using a matching technique (QED).

Process and Outcome Evaluation Questions

Process Evaluation Questions	Outcome Evaluation Questions
Is the program being implemented as intended?	What are the effects of the program?
Are the program activities being conducted according to schedule?	How can the program be sustained or replicated?
What needs to be improved in the program, and how?	Were the intended outcomes achieved?
Descriptive design, correlational design	Descriptive design, correlational design, QED, RCT



Chapter 1 Complete



Recommended next: Chapter 2 – Threats to Validity



Thank You

Please visit our website and follow us on Twitter
for information about our events, priorities, and research alliances,
and for access to our many free resources.

ies.ed.gov/ncee/edlabs/regions/central/index.asp

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Reference

1. W. K. Kellogg Foundation. (2004). *W. K. Kellogg Foundation evaluation handbook*.
<https://www.wkkf.org/~media/62EF77BD5792454B807085B1AD044FE7.ashx>

