

Improving Institutional Corrections Training Academy: Asking the Right Questions – Research Questions versus Survey Questions versus Interview Questions in Outcomes-based Training Evaluation

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This handout will review the differences between research questions, survey questions, and interview questions relevant to the webinar series on outcomes-based training evaluation. This document is a supplement to the material covered in the webinar series and does not serve as standalone training. Please see the series linked [here](#) for more information.

Mini Table of Contents	
What is a research question?	1
Research Question Considerations	1
Example Research Questions	2
What is a survey question?	2
Example Survey Question Format	2
Pros and Cons of Survey Question Format	4
Common Survey Question Mistakes	4
What is an interview question?	8
Steps in the Interview Question Writing Process	8

What is a research question (RQ)?

A research question is a specific question that your research—or, in this case, your training evaluation—seeks to answer. Outcomes-based training evaluation research questions should not be answered with a simple yes or no nor answered by an answer to a single survey or interview question. Your outcomes-based training evaluation may have multiple research questions it seeks to answer, but it is a best practice to make sure each included question is 1) feasible (i.e., able to be carried out with the research), 2) relevant (i.e., focuses on the intended outcomes of the training), and 3) worth inclusion due to the potential value it adds to the overall evaluation (i.e., answering the question adds value). Overall, your research questions should ask what you want to learn about your training (i.e., its impact on intended outcomes, staff behavior, agency-level results, and more). The table below provides a list of additional considerations:

General RQ Considerations	Training Evaluation RQ Considerations
RQs should be clear and concise about a specific topic of inquiry.	RQs should focus on a specific training or training program.
RQs should be answerable.	RQs should be measurable (e.g., can be answered with metrics).
RQs should direct the research process.	RQs should specify the desired outcome or problem the training seeks to address (e.g., gain in knowledge).
RQs should have a strong potential value in their answer.	RQs should be feasible for the level of outcomes-based training evaluation you have the resources to perform.

Example Outcomes-based Training Evaluation Research Questions:

- To what extent does the Use of Excessive Force training program impact correctional use of force incidences in facility A within the first year post-training?
- In the post-course evaluations, to what extent does the New Gap training module decrease the identified knowledge gaps from the 2024 training needs assessment?
- How does the perceived relevance of the OSHA Asbestos training influence staff retention of learned materials six months later?

What is a survey question?

Survey questions are questions often asked in a bulk format on either a survey, questionnaire, or other written form. Survey questions are a form of data collection used to compile information that can ultimately answer your research question(s)¹. Writing survey questions is a combination of art and science. You want to be both creative and critical in the design of your survey questions to accurately and efficiently measure the data you need (i.e., capture opinions, experiences, and behaviors in a valid and reliable way).

Example Survey Question Format:

Surveys or questionnaires can be comprised of both closed-ended (the response options are provided for the participant to choose from) and open-ended (the response options are left open for the participant to provide an answer) survey questions. The next sections provide examples of both question formats and discuss the pros and cons of each. It is important to understand that each question’s format, the order in which they are presented (e.g., grouped by topic versus presented randomly), the language used (e.g., leading questions), and the response options listed can all potentially bias the resulting information you collect. For a full discussion about the potential for bias, please see this article from the Pew Research Center that discusses the development of survey questions, question wording, question order, and more:

¹ Note: There may be other potential data sources to answer your research questions such as administrative data, but for the purposes of this section, we are discussing survey questions as the chosen data collection method.

**Closed-ended Questions:
Response Options Provided on a Survey**

1. On a scale of Strongly Agree to Strongly Disagree, please indicate to what extent you agree with each statement:
 - The group exercises in the training aided my learning¹.
 - I would recommend this training to my coworkers^{Error! Bookmark not defined.}.
2. What factors will keep you from using the content of this [training] in your work? (Select all that apply)¹
 - I need additional training on this subject matter.
 - I will not have the resources I need [to use this training at work].
 - I will not be provided opportunities to use what I learned.
 - I will not have the time to use what I learned.
 - My supervisor will not support me in using what I learned.
 - My colleagues will not support me in using what I learned.
 - The course content is not relevant to my current work.

<https://www.pewresearch.org/writing-survey-questions/>

**Open-ended Questions:
Responses Left Open to Participant**

1. In what ways did instructor A impact your ability to learn the material in the training?
2. Can you describe how this training impacted your work over the last three months?

Pros and Cons of Survey Question Format

Closed-ended Questions		Open-ended Questions	
PROS	CONS	PROS	CONS
<ul style="list-style-type: none"> • Easily analyzable • Easily comparable across participants • Efficient at collecting bulk information • Less burden on the participant 	<ul style="list-style-type: none"> • Can influence the response you get (e.g., the order of responses can change the answer you get; unlisted response options cannot be selected) • Question wording can bias responses • Limits the scope of responses you can receive 	<ul style="list-style-type: none"> • Collect a response not listed or expected • Can establish baselines of common responses for future closed-ended questions • Collects greater detail 	<ul style="list-style-type: none"> • Time-consuming and labor-intensive to analyze • More difficult to compare across participants • Not quantifiable • Question-wording can bias responses

Common Survey Question Mistakes

Survey development is a complex task. This is why an entire academic discipline – survey methodology – is dedicated to better understanding survey design. Based on this area of research, a series of common mistakes have been identified and are listed below. Note that this list is not exhaustive of all potential design mistakes. There are other potential pitfalls, such as sampling issues, survey fatigue, measurement error, and more, which can be reviewed in these resources:

- <https://www.uww.edu/documents/ir/Survey%20Research/Best%20Practices%20in%20Survey%20Design.pdf>
- <https://coast.noaa.gov/data/digitalcoast/pdf/survey-design.pdf>
- <https://www.pewresearch.org/survey-mode-and-sample-design/>

1. *Double-barreled Questions:* A double-barreled question refers to a survey question that asks about two topics or two concepts in the same question. With double-barreled questions, it is difficult to interpret if a given response is valid or reliable information. Double-barreled questions should be avoided. In the example, the participant is asked to rate two instructors in a single question. This is difficult to do unless both instructors performed identically (which is unlikely).

Example: Q1) On a scale of Strongly Agree to Strongly Disagree, please indicate to what extent you agree with this statement: Instructor Jane Doe and instructor John Doe presented the course materials in an organized manner.

Corrected: Q1) On a scale of Strongly Agree to Strongly Disagree, please indicate to what extent you agree with this statement: Instructor Jane Doe presented the course materials in an organized manner.

Q2) On a scale of Strongly Agree to Strongly Disagree, please indicate to what extent you agree with this statement: Instructor John Doe presented the course materials in an organized manner.

2. *Overlapping Response Options:* In closed-ended questions, the provided response options should be mutually exclusive. In the example below, an individual making \$50,000 per year can select both options B and C because there is overlap in the responses, meaning that both can be true. This will skew the final results of this question depending on which answer participants earning \$50,000 per year decided to select.

Example: What is your current annual, pre-tax income?

- A. Below \$25,000
- B. \$25,001 to \$50,000
- C. \$50,000 to \$75,000
- D. \$75,001 to \$100,000
- E. Above \$100,000

Corrected: What is your current annual, pre-tax income?

- A. Below \$25,000
- B. \$25,001 to \$50,000
- C. \$50,001 to \$75,000
- D. \$75,001 to \$100,000
- E. Above \$100,000

3. *Leading Questions and Leading Language:* The wording of the questions you choose will impact the answers you receive for both open-ended and closed-ended survey questions. A leading question often has the expected answer or some other bias from the researcher preemptively contained in the question. The first question assumes that the participant is experiencing challenges with completing tasks on time in their job at Agency A, when this may not be the case.

Example: What are the biggest challenges you experience in completing your work on time at Agency A?

Corrected: Have you experienced any challenges in your capacity to complete work on time at Agency A? If so, what factors led to the potential delays in timelines?

4. *Confusing Questions:* Survey questions should be clear to the reader in their meaning and free of ambiguity. For example, the question below asks, “Did you take the training?” This is ambiguous because it does not explicitly state which training, when, or what is meant by the word take (i.e., attend, complete, etc.). Overall, the reader’s comprehension and interpretation of the questions will impact the quality of your data when things are unclear.

Example: Did you take the training?

- Yes
- No

Corrected: Did you attend the Outcomes-based Training Evaluation: Module 1 on January 21, 2024?

- Yes
- No

5. *Question Length:* Survey questions should be as concise as possible to clearly state the intended question. The longer and more complicated a survey question may be, the participant may lose focus and interest, be confused, or choose to skip the question entirely. The question should be clear, and the response options should be comprehensive while not overburdensome. In the first question, the response options are wordy, most of which are significantly reduced in the corrected example. These categories may also be further collapsed depending on the purpose of the question. For example, if you are administering a survey to understand why recent interviewees did not accept their job offer and you know that retirement, vacation, and sick leave are all contained in a single benefits package for all employees, then those response options can be collapsed into a single response option.

Example: Select all that apply. Which of the following factors are important to you when accepting a new job offer?

- The salary meets a living wage and my basic living needs.
- The job includes family leave for me and my partner (if applicable).
- The health insurance options are adequate and do not require extensive out-of-pocket costs.
- The capacity to have a flexible schedule, including telework days.
- The office culture is collegial and not antagonistic or antisocial in any way.
- There is room for promotion and career advancement.
- The job includes travel opportunities to see other locations.
- The commute is not excessive from my current location.

- The employee benefits include retirement, vacation, and sick leave.
- I can maintain a work/life balance as I see fit.
- There is the opportunity for bonuses at least once per year.
- I will get along with my supervisor, and they do not micromanage my work.
- I am given the option to pursue other training and professional development.
- Other – specify: _____

Corrected: Select only three options. Which of the following factors are most important to you when accepting a new job offer?

- | | |
|-------------------------------|---|
| • Salary and Bonuses | • Career Advancement Opportunities |
| • Family and Parental Leave | • Training and Professional Development |
| • Vacation and Sick Leave | • Travel Opportunities |
| • Retirement Benefits | • Reasonable Commute |
| • Affordable Health Insurance | • Work/Life Balance |
| • Collegial Office Culture | • Flexible Working Hours |
| • Management Style | • Option to Telework |

6. *Ambiguous Rating Systems:* With closed-ended questions, response options utilizing a Likert Scale should always include value labels so that the rating system is clear to the reader. In the example, it is unclear what the value of each response means. Which rating is more positive (scoring a 1 or a 5)? What is the difference between a 2 and 3?

Example: How likely are you to recommend the Outcomes-based Training Evaluation webinar series to a coworker?

- 1
- 2
- 3
- 4
- 5

Corrected: How likely are you to recommend the Outcomes-based Training Evaluation webinar series to a coworker?

- 1 – Extremely unlikely
- 2 – Unlikely
- 3 – Neutral
- 4 – Likely
- 5 – Extremely likely

7. **Too Many Questions:** The total number of questions included in a survey or questionnaire needs to be considered before delivering the survey, as this will impact the length of time needed to complete it. As a survey grows in length, the probability that the survey questions will go unanswered rises, increasing both missing data and nonresponse bias. Prior research suggests that the maximum survey length is about 15 minutes to prevent these issues (Reville et al., 2020²). It is a best practice to pilot your survey to understand the time to completion before sending it out.

What is an interview question?

In some cases, a survey and other pre-existing data sources may not have the information you need to complete your outcomes-based training evaluation. You may need to include qualitative research in your evaluation plan, such as interviewing members from the workforce (i.e., current, future, and past trainees). For example, you may find that trainees did not perform well on their post-course assessments and would like to find out why that is the case. Was the information unclear? Was it something about the instructor, or maybe another explanation that you have not thought of? Interview questions are reserved for when you do not have enough information, need more details to create a better understanding of a particular phenomenon or behavior, or need to uncover information that you did not or could not expect. Many of the same considerations and common mistakes found with survey questions can apply when creating an interview instrument (i.e., a list of questions to plan to ask in the interviews), such as avoiding double-barreled questions and leading questions, remaining cognizant of the length of the interview, and reducing ambiguity and confusion in the questions (see above).

Steps in the Interview Question Writing Process

The following describes the steps you can take in your interview question writing process:

- Step One:** Identify your research questions for your Outcomes-based Training Evaluation (i.e., the research problem)
- Step Two:** Determine if pre-existing administrative data or survey data is sufficient to answer your research questions. If not, determine if interviews will provide the necessary information.
- Step Three:** Identify your sampling frame (i.e., the universe of potential interviewees you can draw from) and then identify your sample (i.e., who you will ultimately ask to participate).

Note: Your final sample selection can also contain bias based on who you talk to and their ability to represent the perspectives of all trainees (i.e., the

² Revilla, M., and Höhne, J. K. (2020). How long do respondents think online surveys should be? New evidence from two online panels in Germany. *International Journal of Market Research*, 62(5), 538-545.

capacity for their responses to apply to the experiences of other trainees and other situations).

Tip: You want to consider how many total people you plan to talk to, their demographics, and how their responses may be unique from others. For example, if your training is comprised of both men and women, you want to ensure you interview both men and women for the evaluation.

Step Four: Draft an interview instrument (i.e., a tool comprised of the questions you plan to ask during the interviews) and pilot this instrument on a few people to identify the length of time to complete the interviews and if any questions need to be revised for clarity.

Tip: During your interviews, use probes. Probes are follow-up questions that are not incorporated in the initial instrument and are used to gain clarity during the interview process. For example, “Can you explain what you meant by X?”

Tip: Best practice for the length of your final interview instrument should fall between five to 15 questions depending on the goals of the research, intended interview length, and complexity of the topic(s) (Guest et al., 2013³).

Step Five: Complete your interviews and either record the sessions (if permitted) or take diligent notes. Then, prepare the text by transcribing the recordings to analyze for themes and codes.

Tip: Qualitative data analysis is a complex process. Before beginning, you can review these additional resources below:

- <https://www.youtube.com/watch?v=j9A3ceOBihM>
- https://www.youtube.com/watch?v=8MHkVtE_sVw
- <https://guides.library.illinois.edu/qualitative/coding>
- <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8457700/>

³ Guest, G., Namey, E. E., and Mitchell, M. L. (2013). *Collecting qualitative data: A field manual for applied research*. Sage.

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