# The Retrospective Post-then-Pre-Test (RPT) Design

## Too long; Didn't Read

The retrospective post-then-pre-test (RPT) survey design uses a set of identical questions asked about two points in time. Respondents first answer in terms of what they think NOW, after the program (post-test). Then, on the next page or screen, they answer based on what they believe they thought before the program began (pre-test). While no design is perfect, below are four benefits that an RPT may bring your organization for your next end-of-program survey.

- **You get more program time** because you eliminate the need for a survey at program start.
- **Participants experience reduced survey burden** because there is just one survey.
- **Matching responses is easier** because no pre-survey / post-survey matching is involved.
- **Maintaining anonymity is easier** because there may be no need for names or unique identifiers.

## What is an RPT?

A retrospective post-then-pre-test (RPT) survey design includes two sets of questions. The first set measures *current* knowledge, attitudes, skills and/or behaviors. Participants then complete the same questions with reference to where they were just *before* the program. This second set of questions forms the "retrospective" component of the RPT. This method can easily be built into a longer survey if you want to capture additional data, such as participant demographics, satisfaction, and suggestions for improvement.

## Why choose an RPT?

The main benefit of an RPT over the standard pre-post design is that it controls for something called response-shift bias (Klatt & Taylor Powell, 2005). This bias creeps in when new learning or understanding makes it look like there was a drop from pre- to post-test, when really the participant "didn't know what they didn't know" at the start of the program. Survey results from traditional pre-post self-reported data can be clouded because people either overestimate or underestimate their knowledge, attitudes, skills, or behaviors at pre-test, before they fully understand the concepts. An RPT helps avoid response-shift bias because participants rate themselves with one frame of reference, making them less likely to over or understate their baseline level (Klatt & Taylor Powell, 2005). While there is no guarantee that response-shift bias will occur (Shaw, Cross, & Zubrick, 2016), an RPT can help limit the possibility of it happening.

Klatt, J. & Taylor-Powell. (2005).Synthesis of Literature relative to Retrospective Pretest Design. Panel Presentation for 2005 Joint CES/AEA Conference, Toronto.
Shaw, T., Cross, D., & Zubrick, S. R. (2016). Testing for Response Shift Bias in Evaluations of School Antibullying Programs. Evaluation Review, 39(6), 527-554. https://doi.org/10.1177/0193841X16629863

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## What are the drawbacks?

Any data collection method has risk of various biases. While RPT helps avoid response-shift bias, it is not free of limitations (Geldhof et al., 2018; Hill & Betz, 2005). Three biases associated with the RPT include:

- **Recall bias**: Participants may misrepresent change because their memory of their past situation isn't perfect
- **Social desirability bias**: Participants may misrepresent change to make themselves look better or to please the research or program leader
- **Effort of justification bias**: Participants may misrepresent change because they have spent time and effort in a program and want to see the benefit

## How do I use an RPT?

Start your RPT by asking about the present -- what participants believe NOW that the program ended. Then, on the next page or screen, ask about those same items with respect to how they think they would have responded BEFORE the program.

### For example...

| 1. Now that you have read this tip sheet, how much do you agree or disagree with the following? | Strongly Agree | Agree | Disagree | Strongly Disagree |
|---|---|---|---|---|
| a. I understand what "RPT" survey design is. | ○ | ○ | ○ | ○ |
| b. I can identify the benefits of an RPT. | ○ | ○ | ○ | ○ |
| c. I plan to try an RPT with my program. | ○ | ○ | ○ | ○ |

*Typically the retrospective question appears on a new page so it's not as easy for the respondent to compare their answer to the prior question.*

| 2. Thinking back to just before reading this tip sheet, how much would you have agreed or disagreed with the following? | Strongly Agree | Agree | Disagree | Strongly Disagree |
|---|---|---|---|---|
| a. I understood what "RPT" survey design is. | ○ | ○ | ○ | ○ |
| b. I could identify the benefits of an RPT. | ○ | ○ | ○ | ○ |
| c. I was planning to try an RPT with my program. | ○ | ○ | ○ | ○ |

Good luck trying out the RPT design!

Geldhof, G. J., Warner, D. A., Finders, J. K., Thogmartin, A. A., Clark, A., & Longway, K. A. (2018). Revisiting the utility of retrospective pre-post designs: The need for mixed-method pilot data. Evaluation and Program Planning, 70, 83-89. https://doi.org/10.1016/j.evalprogplan.2018.05.002

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