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Using the Retrospective Post-then-Pre-Questionnaire Design to Evaluate Extension Programs

Overview: Retrospective Post-Then-Pre-Questionnaire Design is a valuable tool for assessing the effectiveness of programs, which aim to provide educational resources and support to individuals and communities. This method allows researchers to collect data on short-term and medium-term impacts by asking participants to reflect on their knowledge and behaviors before and after the program. Below is an explanation of the strengths and limitations, steps for implementation, and an example of how it can measure short-term know and medium-term program impacts.

Strengths

Using the Retrospective Post-then-Pre-Questionnaire Design in evaluating extension programs offers several strengths and advantages:

1. **Overcomes Pre-Event Data Collection Challenges:** This design eliminates the need for pre-event data, making it practical for such scenarios.
2. **Cost and Time-Efficient:** It requires only one data collection point (post-event) immediately after the program, reducing the time and resources needed for conducting multiple surveys at different time points.
3. **Assesses Short-Term and Medium-Term Impact:** It allows for assessing immediate short-term changes (knowledge, confidence) and medium-term behavior changes, providing a more comprehensive understanding of program effects.
4. **Practical for Programs with Rapid Outcomes:** It benefits programs with immediate and discernible impacts. For example, in emergency response or disaster relief programs, changes in knowledge or behaviors may be evident quickly.
5. **Facilitates Comparative Analysis:** The design enables researchers to compare participants' perceptions of their knowledge or behaviors before and after the program, providing insights into the extent of change achieved.

While the questionnaire design offers many strengths, it's essential to acknowledge its limitations, such as potential recall bias and the inability to measure long-term impacts. Researchers should carefully consider the specific context of their program and the research questions they aim to address when deciding to use this approach.

Limitations

Using this design to evaluate programs has several limitations that researchers should be aware of:



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1. **Recall Bias:** Participants are asked to remember their pre-event state, which can lead to recall bias. Memories of their initial knowledge, attitudes, or behaviors may be inaccurate, especially if a significant amount of time has passed since the program.
 2. **Dependence on Memory:** The accuracy of responses relies on participants' ability to recall their pre-event status, which may be influenced by cognitive biases, forgetting, and other factors.
 3. **Inability to Measure Long-Term Impacts:** This design primarily captures short-term and medium-term changes. It may not be suitable for assessing the long-term, sustained impacts of an extension program.
 4. **No True Baseline:** With a genuine pre-event assessment, researchers can establish a baseline to compare changes. This may limit the ability to quantify the exact impact of the extension program.
 5. **Inability to Analyze Changes Over Time:** Analyzing changes or trends over time, such as before and after multiple program sessions, is only sometimes possible using this design.
 6. **Incompatibility with Some Evaluation Models:** Some models or frameworks may require precise pre-event data, making this design incompatible with specific evaluation approaches.
 7. **Potential for Misinterpretation:** The design can lead to misinterpretations if participants need to understand the instructions or if there are differences in how individuals interpret their pre-event status.

Despite these limitations, this questionnaire design can still be a valuable tool in specific situations where traditional pre-event data collection is impractical. Researchers should be mindful of these limitations and consider whether this approach suits their extension program evaluation, depending on the research questions and the specific context.

How to Implement

At the end of the program, survey participants by asking them to rate their current knowledge, skill, attitude or behavior related to the intended program outcomes. Next, ask them to reflect back to before the program and also rate their (before the program) knowledge, skill, attitude or behavior. This will provide you with a direct comparison of the impact the program had on the participants using their self-assessment.

Example: Measuring Short-Term Knowledge and Medium-Term Behavior Changes

Educational Program: Promoting Sustainable Agriculture Practices

1. **Short-Term (Awareness):** Administered immediately after the program.



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- Question: "Rate your level of awareness of sustainable agriculture practices after attending this program on a scale from 1 (not at all knowledgeable) to 5 (very knowledgeable)."
 - Question: "Rate your level of awareness of sustainable agriculture practices before attending this program on a scale from 1 (not at all knowledgeable) to 5 (very knowledgeable)."
2. **Medium-Term (Behavior Change):** Administered a few months after the program.
- Question: "Before attending the sustainable agriculture program, how often did you incorporate the following sustainable farming techniques (e.g., crop rotation, etc.) in your practices?"
 - Question: "Since attending the program, how often have you incorporated the following sustainable farming techniques in your practices?"

Considerations:

- Researchers should pilot-test the questionnaires to identify any ambiguities, issues, or potential sources of response bias.
- Clear instructions should be provided to participants to minimize misinterpretation.

Data Analysis:

- Short-Term: Calculate the average rating from the pre and post survey to determine immediate awareness gains.
- Medium-Term: Compare the responses from the pre-event and post-event responses to assess changes in behavior. For instance, if participants reported a higher frequency of incorporating sustainable practices in the post-event responses compared to the pre-event responses, it indicates a positive behavior change.

By using the Retrospective Post-Then-Pre design, programs can evaluate their effectiveness and gain insights into both short-term and medium-term impacts, allowing for more informed decision-making and program improvement.