

7. PRE-POST QUIZZES

Pre-post quizzes are brief surveys that are used before and after an event. They are ideal for helping you understand whether or not your audiences have learnt key aspects of the content you are trying to convey. Their purpose is to focus specifically on your content (not on other things your audience might or might not know).

WHAT DO I NEED?

Pre-post quizzes can be delivered on paper or online. If you decide to use paper versions, you'll need to prepare plenty of copies in advance and have pencils or pens available at your event, as well as flat surfaces to write on. It's fine if clipboards aren't available as long as there are tables or other surfaces around. When planning the event, make sure to have time set aside at the beginning and end when people can fill in the quiz!

LET'S GET STARTED

Prior to the event, you need to create the quiz - see our designing surveys section for detailed advice on types of questions and how to create the quiz. The pre- and post-quiz questions need to be the same, so they can be compared. They also need to relate very directly to the content you are covering – this is not the place to find out what else they might know about the topic.

Question types

Three of the most common question types for pre-post quizzes are multiple choice, True/False and multiple response. Questions where participants



have to write in their answers are not usually suitable for a pre-post quiz as they will take too much time for respondents to complete and it's usually very complicated to accurately compare before and after answers for open questions.

Post-quiz

The questions on your post-quiz need to be identical to those on the pre-quiz, for ease of comparison. The post-quiz can be distributed at the end of the event (either on paper or as an online link participants can access via their smartphones, tablets or computers). For higher response rates, be sure people have time to fill them in before leaving the event! You can also choose to run your post-quiz at a later date in order to explore longer term impacts (e.g. by sending a link, if you have been able to collect email addresses). This is known as a delayed post-quiz. Be aware that if you use a delayed post-quiz and see an improvement in responses, this could be because of something people learned later, outside of your event. They could also have looked up the answers when completing the later survey at home! It is also likely that you will receive far fewer responses - you may need an attractive prize or other incentive to encourage people to submit their delayed post-quiz responses.

Comparing responses

Ideally you want to be able to match individuals' responses to the pre-quiz directly with their responses to the post-quiz. However, this means gathering personal information – most likely names – which may be considered unethical (it's better to keep evaluation data anonymous if possible), or may worry the participants as their answers could be traced back to them individually. One alternative is to have participants create a code that is unique to them, but not known by anyone else, that they write at the bottom of their pre- and post-quizzes.

OK, WHAT DO I DO WITH MY DATA NOW?

You'll need to start by entering your data into a programme for analysis (see our analysing surveys section). Then, you can compare the percentage correct (or the scores) for each question, by averaging across all the respondents. If you do have matched data from pre/post quizzes, you can come up with a scoring schema that reflects whether your respondents moved from incorrect to correct (or correct to incorrect) or whether their scores increased or decreased on each question and overall. For instance, a person could receive 1 point per question if they have moved from incorrect to correct – you are basically trying to describe whether their performance improved, decreased or stayed the same.

In the likely event that you aren't able to fully match the respondents in your pre- and post-quizzes, you can't assume that the same sorts of people completed the before- and after- surveys so you need to be cautious in how you interpret the data. However, if you see evidence of improved understanding of your key items across the board, it is likely that at least some of your audience have learnt something. In addition, if your pre- and post-quiz happened fairly closely together in time then you cannot claim a long-term impact. On the other hand, if individuals' performance on the quiz improved from pre to post and the post-quiz was immediately after the event, it is unlikely that the improvement is due to some other cause!

Finally, although the pre-quiz may have drawn people's attention to certain parts of the event (or the content covered), that does not mean that other content was not learnt. Just use your common sense and focus on what data you DO have and what you CAN say about that data when writing up your results...

GOT IT! HOW CAN I TAKE THIS FURTHER?

If you would like, you can incorporate more question types into the mix. For instance, you could expand on the True/False question type to include the following response choices: Definitely true, Probably true, Not sure, Probably false, Definitely false.

If you have data from enough respondents (at least 20 and ideally closer to 50) and would like to delve further into your data, you could utilise some basic statistical analyses. Given the short nature of the quiz, either t-tests or non-parametric versions (Mann-Whitney U test or Wilcoxon signed-rank test) are likely to be most appropriate

SIMILAR TECHNIQUES

Quirky questionnaires - Questionnaires conducted in a quirky way related to the topic of the activity, e.g. folded into paper aeroplanes and flown into the 'hanger' (collection box) or 'slam dunked' through a basketball hoop.

Kahoots - Quizzes become more fun with "Kahoots": free editable online games. These are perfect for school students of all ages, and can be run on many different types of devices, making them a very flexible addition to a workshop or classroom environment. For older audiences with their own technology you can also run them using their own mobile phones.