

Planning a quasi-experimental design evaluation (QED)

What is a quasi-experimental design (QED)?

- A QED is a type of evaluation design that estimates the causal impact of an intervention on a sample without random assignment.
- There are many types of QED, but they all involve statistically generating a counterfactual (a way of simulating what would have happened if the intervention/programme had not taken place) without random assignment. The impact of the intervention can be measured by comparing the outcomes of the counterfactual and the intervention participants.
- This guidance is designed to introduce you to the key steps involved in carrying out a QED. For more detailed guidance, refer to the [video and webinar recording on QEDs](#).

Monitoring and Evaluation Framework Step 1: Diagnose

1 Using theory of change to inform your evaluation

- Having a well-thought-out [theory of change](#) will help to inform research questions and contextualise the evaluation findings.
- Before planning your evaluation, it is important to understand the mechanisms by which you expect the intervention to lead to the outcome.

Monitoring and Evaluation Framework Step 2: Plan

2 Gather your team

- QEDs require research expertise. You will need access to individuals who are experienced in designing QEDs and QED analysis. Consider whether you have this expertise in-house or if you require support from an external supplier.
- You will also need to involve practitioners with a deep understanding of the intervention and staff in charge of data.

3 Set your research question(s)

- The research question(s) should be about the causal impact of the intervention or scheme: Did [scheme] increase [outcome] among [group]?

4 Identify your outcome measures

- Aim to use validated scales (e.g. from the [ASQ](#)), interim or proxy outcomes (e.g. GCSE selections, sign-ups to event), or core impact measures (e.g. A-level attainment, higher education continuation).

5 Identify opportunities for QEDs

- Consider whether a QED evaluation of the intervention is of strategic value to the institution and/or the sector, and whether it can meet the robustness threshold for [Type 3 \(causal\) evidence](#).
- You will need to identify appropriate opportunities to statistically generate a counterfactual (e.g., using student data from previous cohorts, or students who were eligible for but were not accepted on to an oversubscribed programme).
- You will need to make sure the data you have access to is complete and provides a large enough sample size for robust analysis.

6 Understand your sample size

- Determining the minimum sample size for a quasi-experimental study depends on several factors, including the desired statistical power, effect size, and significance level.
- It is very likely you will need guidance from a statistician.

<p>7 Choose your QED design</p>	<ul style="list-style-type: none"> • There are many types of QEDs, and they establish the counterfactual in different ways. • The introductory video and webinar recording on QEDs include more information about each of these designs.
<p>8 Identify the planned analytical approach</p>	<ul style="list-style-type: none"> • Based on the considerations around the intervention, the available data, and the QED approach, identify the analytical (statistical) approach that will be applied. • This will require statistical expertise.
<p>9 Create a research protocol</p>	<ul style="list-style-type: none"> • Lay out your evaluation approach and implementation. TASO's protocol templates can help with this.
<p>10 Get ethical approval from your institution</p>	<ul style="list-style-type: none"> • This needs to be done in advance, so ensure you plan in enough time for the evaluation to be approved. • You will usually need to provide a research protocol and information about the risks to participants to secure ethical approval. TASO's research ethics guidance can help with this.

Monitoring and Evaluation Framework Step 3: Measure

<p>11 Collecting and storing data</p>	<ul style="list-style-type: none"> • Most QEDs involve analysing existing datasets, such as institutional data, re-returned data from HESA, or graduate outcomes survey data. • If you are using existing data sets, check the data for completeness to ensure the required analysis is possible. • If you are collecting new data, make sure you are using robust and reliable data collection tools (e.g., behavioural measures or validated surveys).
<p>12 Analysing data</p>	<ul style="list-style-type: none"> • Follow the plan you laid out at the beginning and engage someone with statistical expertise.

Monitoring and Evaluation Framework Step 4: Reflect

<p>13 Interpret your findings</p>	<ul style="list-style-type: none"> • Statistical analyses may identify statistically significant or statistically non-significant (null) results. Consider what this tells you about the intervention. Remember, a non-significant result does not always mean the intervention has no effect on the outcome, just that this evaluation has failed to detect one. • A significant result means you can be fairly certain the intervention has had a causal influence on the outcome. If the result is significant and positive, the intervention has significantly increased the outcome. If the result is significant and negative, the intervention has significantly decreased the outcome. • Interpret your results alongside your theory of change and consider the practical implications. • Publish your results (using TASO's reporting templates).
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