Start here:

Have you used a theory of change to inform your research questions?

No

Research questions should be informed by the theory of change, considering the outcomes, change mechanisms, and assumptions.

See TASO theory of change guidance for more information.

Yes

Do you want to know if your intervention caused any changes in outcomes?

No

Consider whether implementation and process or value-for-money approaches are more appropriate.

See TASO evaluation guidance and HM Treasury's 'Magenta Book' for more information on implementation and process and value-for-money approaches.

Yes

Consider these questions on the nature of your intervention/impact together. If you cannot answer 'Yes' to either of these questions, experimental methods may be less feasible.

Is the intervention clearly defined and consistent over time?

Are you expecting the intervention to lead to direct changes (outcomes) shortly after implementation?

Both no (less feasible)

If the intervention is hard to define and dynamic, or the expected effect is complex and gradual, then it may be less feasible to use experimental or quasi-experimental methods.

Consider theory based evaluations or other small-n evaluations.

See TASO evaluation guidance and small-n guidance page for more information.

At least one yes (more feasible)

Consider these questions on the availability of data together. If you cannot answer 'Yes' to the majority of these questions, experimental methods may be less feasible.

Is outcome data available for both participants and non-participants of the intervention?

Can you gather data for a sufficiently large sample size to ensure statistical robustness? This typically ranges from several dozen to thousands of participants, depending on the expected effect size, study design and variability in outcomes.

Will pre-intervention outcome data be collected or has it already been collected?

Will the same outcome data be collected/available during and after the intervention?

Is demographic or contextual data available for intervention participants and non-participants?

Mostly no (less feasible)

You may be able to use experimental or quasi-experimental methods, but consider whether other methods would be more appropriate, and how you can develop your data infrastructure to enable the use of experimental or quasi-experimental methods.

Consider theory based evaluations or other small-n evaluations.

Mostly yes (more feasible)

Can participants be randomly allocated to take part in different interventions?

Yes

Is it ethical to delay or withhold the treatment from some participants?

An RCT may be more likely to be ethical if the intervention's benefits are not well established, or if you can use a waitlist design to ensure all participants eventually receive the intervention.

Yes

No

No

RCTs

Can you randomly allocate each participant into a different part of the trial?

Explore individual RCT

Are there limits to how many people can receive the intervention at once, and can you randomly select groups to start at difference times?

Explore stepped-wedge or waitlist RCT

Do you need to randomly allocate groups (e.g. all students taking a module) of participants to different parts of the trial?

Explore clustered RCT

Quasi-experimental designs (QEDs)

Explore difference-in-difference

Do you have data on both those who do and those who do not take part in the intervention before and after they took part in it?

Is there a separate, unrelated factor you can use to predict who receives the intervention without directly influencing the outcomes you're interested in measuring?

Explore instrumental variables

Explore regression discontinuity design

Do intervention participants take part based on reaching/exceeding certain criteria, such as grades?

Do you have detailed individual level data on known factors influencing participation for both intervention and control groups?

Explore matching

Explore synthetic control

Can you use historical data to construct a similar ‘clone’ of a group receiving an intervention?

Is there extensive data available before and after a whole provider intervention, with no other significant changes at the time of the intervention that could affect the outcome?

Explore interrupted time-series

Consult accompanying methodology overviews for more information on each of these methods.

If these methods are new to you, we strongly encourage you to consult the complementary methodology overviews, where for each method you will find:

- A more detailed explanation on the method, and some of the key assumptions it relies on
- A higher education example application
- Pros and cons of the method
- Further resources that contain more technical and in-depth information