

When designing an experiment, the PICO elements can be useful. These are elements to keep in mind when formulating a hypothesis and describing your experiment.

Population

Your population will be the subjects you want to do research on. For funder experiments, this will usually be grant applicants or grant applications. When describing your population, you should usually carefully explain all the details surrounding your population. This can be which grant call the experiment is applied to, if it is applied to the whole call or just portions of it, and to particularly mention factors which you think might affect how well your intervention works. It is also a good idea to say something about your expected sample size.

Intervention

The intervention, or treatment, will be the change that you have made and that you want to evaluate. Being specific is a good way to share with others exactly what you have in mind and makes it easier for others to give feedback or to find others wanting to do the same thing.

Comparison

The comparison, or control, is the group you intend to compare your treatment group to. The idea is that the comparison is intended to tell you something about what would have happened to those receiving treatment if they hadn't received it. Sometimes, this can be another grant call where you have not applied the intervention, other times you would randomly split some subjects into treatment or control groups, and on occasion you might use a shadow experiment, which means that you are not officially implementing your treatment, so that you can compare with the actual outcome of the grant call.

Outcome

Your outcome will be the thing you want to measure. This is supposed to be something that will tell you if your intervention was successful or not.