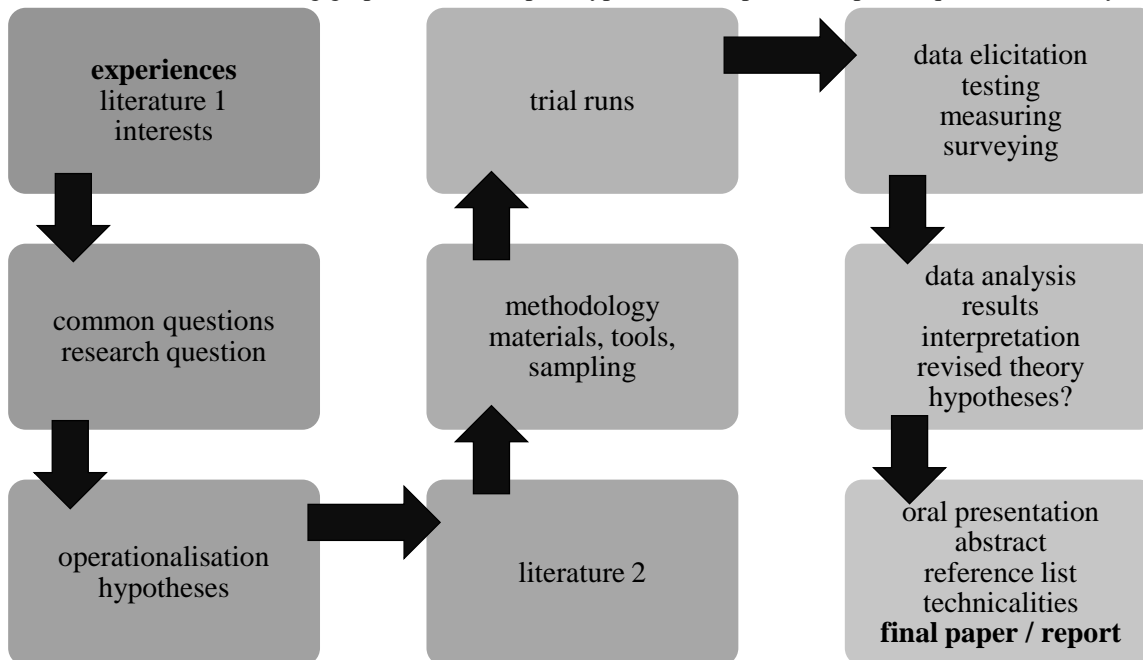


Roadmap to your empirical study

The following graph illustrates a prototypical roadmap to an empirical quantitative study:



Researchers normally get their ideas partly of what other researchers suggest should be done. As students, you probably start with some experiences, personal interests, or papers you have already read.

Then, out of this interest and experience, usually a question arises, rather informally, which then could be phrased into a research question that is precise, concise, doable, and non-redundant.

From there, this question needs operationalizing. How can I actually pursue this question? What and how can I measure? How can I make things visible? Once this is taken care of, hypotheses about likely outcomes can be developed. This is important, to be aware of expectations, scopes, and limits of your research, and the danger of ending up on the wrong track, too.

The next step would be a second closer look at existing literature, what studies found out, what they suggest for avenues for further research, and which experimental designs have proven successful. No need to re-invent the wheel here.

Equipped with ideas and inspiration from existing studies, now would be the time to devise your own methodology, adapt materials and procedures, get hold of professional and validates tests, scales, or questionnaires, and finally design the experiment or study. You must also choose your participants and subjects with care. Make sure your sample is as representative for the population you would like to explore as possible. For a quantitative study examining one dichotomous factor (gender), you would need about 60 people, so that each of the two subgroups contains data of around 30. Only then do a lot of statistical calculations really make sense. Finally, this is the phase for serious ethical considerations, too.

Trial runs should make sure that the tools work as expected, that participants behave as expected, that you can actually measure what you want to measure, that the data elicitation and recording is practical and doable, and that you have access to everything you need well in time.

The next step consists of the actual data elicitation, testing, measuring, or surveying. Here it is important to computerise your data if you have used paper-and-pencil methods, make back-ups of raw data and start writing up the whole procedure as long as it is fresh in your mind in your methodology section.

Then the most interesting phase starts: your first look at the data. Without biases in any direction, approach your data as neutrally as possible, look at scores, distributions, patterns, and trends, log any interesting information, and start writing your results chapter as you proceed. Also, choose statistical procedures with care, seek help if you are not on top of this, and read up on these things so that you always know exactly what you are doing. While your data unfold, revise your theory chapter, make sure it matches perfectly with your results and interpretations; it should contain everything a reader needs to understand what you did, but it should not provide redundant and excessive theoretical discussion which are eventually irrelevant for the actual study.

Your paper is already filling up. And now is the time to report to people about it. Only by concisely summarizing everything you did, and only if you are forced to communicate all of this in a lucid and thorough fashion will you become aware of your study's strengths, limits, and potential pitfalls. If your audience does not understand what you report, then there might be fundamental problems lurking, which you might be able to fix at this stage but probably not afterwards anymore. At this point you should also maintain a good reference list, be able to handle the APA document well, have a first draft ready for proof-reading, and finally write your abstract – in retrospect – so that all your study's essentials, from the research question to the interpretation of the data, is presented coherently. Finally, make a print-out, have somebody proof-read your paper, sort out the technicalities, have the required format ready, and submit your work well in time.