

Research Method-Quick Notes from a Higher Ed Reader

Overall, a research method should be communicated so that someone trying to reproduce your study would have no problem doing so. The following summarizes some thoughts on research method choice, philosophy, and communication of that method:

1. **Inductive or deductive?** Are you looking for an answer to an open-ended question? If yes, then inductive. If you're looking to "test" or "prove" a hypothesis then that's more deductive. STEM papers tend to be more deductive. Science is a deductive process. This doesn't mean that you can't use some induction in science, just that it tends to lean deductive.
2. **Positivism or phenomenology?** Are you analyzing numbers and "hard" data? That's positivism. Are you analyzing feelings, thoughts, and emotions? Those things are harder to quantify. That's phenomenology. Phenomenological research is harder to communicate to folks who tend to think in terms of numbers. It doesn't mean that phenomenological research is wrong or unnecessary, just more challenging to convince people who are looking for "proof".
3. **Exploratory or conclusive?** Is this research designed to open up more and more questions or affirmatively answer old ones? Both approaches are valid and needed. However, if research is exploratory, that should be communicated!
4. **Primary or secondary data?** When data is collected (whether positivist or phenomenological) it's either brand new (primary) or gathered from already-published sources (secondary). Both types of data are important. A paper doesn't have to have primary data, but if it does not, it needs to really come up with a new outlook that is not found in any individual secondary source.
5. **Qualitative or quantitative?** Quantitative research analyzes the relationship between variables, hopefully using statistics to convince the reader of validity. Qualitative research looks for patterns in narratives or themes. When using quantitative data (like a survey) be careful not to avoid the thoughts and feelings of survey participants. When using qualitative data, numbers cannot help prove generalization. Be aware of that limitation.
6. **Advantages and Disadvantages?** A good research method realizes and communicates the advantages and disadvantages of the approach used. A good way to ensure validity of the method is to adapt or follow a method that has already been proven as valid by authorities in the field. Even proven methods have inherent disadvantages. An honest researcher does their best to communicate this to the audience.
7. **Sampling Choices?** If samples are taken (polls, materials, etc.) then the method needs to include a discussion of how the samples were chosen.
8. **Ethics?** No method description is done until the ethical choices of the method are communicated. Were there human subjects? If so, was IRB consulted? Is there any possibility for danger for someone attempting to reproduce the method? If so, this must be communicated for safety.