A Systematic Process to Learning Research Ethics

External Validity Examples

Bin Sun, Siva Krishna Dasari

{bsn,skd}@bth.se

Abstract.

For PhD students, one key norm is to follow ethics to plan, conduct and report their work and results. However, it is hard to learn research ethics in every step when conducting research. The reason is that although people can recognise common ethical norms, they interpret and apply them in different ways. This is why there are ethical issues in research. Thus, it is important to know how to learn research ethics so that we have a common understanding of what it means and how it should be followed during research.

In this work, we first present several alternative procedures to handling research ethics and validity. Later, we analyse those methods and present a combined systematic process. We use this combined systematic process to analyse several cases to demonstrate how students can use this process for their research. The demonstration explains the process using external validity examples. When conducting research, researchers and students often need to use data in their research studies or thesis work. This data could be raw data or confidential data. In both cases, pre-processing is necessary. This raises ethical issues because excluding some information may affect the outcome of interest or the outcome may change before and after processing data. Thus, there are some overlaps between external validity and research ethics. For example, how to handle raw data so that they can be processed by some algorithms and methods while making sure the handling is not misconducted or to what extent the data should be shared to allow the readers to replicate the experiments while keeping sensitive data credential.

From the demonstration and feedback of the class, we observed that the combined systematic process is working well and it is recommended to use this process to learn research ethics.