

10 Tips for PhD Research

Dr. Dario Toncich



Tip Number 2 – Keep it Simple

A common misconception amongst PhD candidates is that the central theme of their research needs to be complicated in order to have academic merit. This is not a valid assumption. The research, experimentation and analysis may all, of themselves, be highly complex but the central theme needs to be clear and succinct.

One of the greatest self-inflicted causes of PhD problems is that students create complex research themes which never become clear in their own minds. The end results of a complex central research theme include:

- A convoluted methodology
- Time wastage on experimentation which is irrelevant to the theme and omission of experimentation that is critical to the theme
- An inability to create a body of work which systematically implements a hypothesis and validates the outcomes against relevant criteria.
- A poorly written thesis/dissertation and defense which fails to make the grade.

A good rule-of-thumb is that if a research student cannot explain their central research theme to a lay-person with one or two sentences, then that student probably doesn't have a good grasp of what they are trying to achieve. Consider the following as useful ideas for simple central research themes:

- *"The objective of this research is to determine if a relationship exists between A and B."*
- *"The objective of this research is to develop a device which can measure C and then assess its effectiveness against other reference methods."*

Once a Doctoral theme becomes more complex than this, then it is easy for a research student to lose track of what they are attempting to achieve; how it needs to be achieved, and how it needs to be tested to make a convincing argument.

The central research theme not only needs to be simple, it also needs to be an open-hypothesis which does not predispose the research to a particular outcome. The following would be a closed hypothesis:

"The objective of this research is to establish a relationship between A and B."

This predisposes the research, potentially introduces bias, and suggests that the research has failed if a relationship cannot be established.