

Common Pitfalls for the Research Prospectus

Missing or Inappropriate Statistics: Most biological studies seek to falsify a null hypothesis through the use of statistical tests. For instance, you might use an ANOVA to determine if treatments are significantly different from controls, or run a regression to assess what proportion of the variance in one variable is due to another variable. Based on your experimental design, you should be able to say in advance what tests you will run and how you will interpret the results. You need not go into the details of a given statistical procedure, but you should indicate what tests will be used and how you expect to interpret the test results.

Badly Formatted Reference Section: The goal of scientific research is to publish your findings in the peer-reviewed literature. It is critical, whether writing your thesis or preparing a manuscript for publication, to pay close attention to your formatting. It is expected that you the author will find and correct all errors before your manuscript is sent to press. Students typically make many of the following mistakes, which make reading a prospectus difficult. Learn to catch and correct these errors now, so it will be second nature when you are writing a paper or your thesis.

Choose a journal from your field of research, and follow its format for citing references in the text, and for formatting your Literature Cited section.

Please use a consistent format for all references:

- either italicize all journal names, or no journal names
- use all middle initials for authors, or none
- year of publication should always appear in the same place in each citation

Either capitalize all words in an article's title, or only the first word, but do not switch back and forth

Either put "and" before the last author in each citation, or do not use "and" anywhere in the author string

Do not give issue numbers for journals

Do not include "personal communications", websites, or submitted manuscripts in your references section; these are normally cited within the text (spell out website URL's) but not in the references at the end of a paper

Check that all citations in the Literature Cited section are actually cited in the text, and that there is a reference for all citations given in the text.

Inadequate Review by Off-Campus Mentors: Be sure your advisor has read and corrected your prospectus before turning it in to the department office. In particular, ask your advisor to check that appropriate formatting has been used in references and citations, and that the correct statistics are discussed.