

How to Write and Publish an Academic Research Paper

101 Tips from JournalPrep.com

Planning your Manuscript

1. The research paper topic should be unique and there should be a logical reason to study it.
2. Do your homework. Make sure you know what investigators in your field and other fields have published about your topic (or similar topics). There is no substitute for a good literature review before jumping into a new project.
3. Take the time to plan your experimental design. As a general rule, more time should be devoted to planning your study than to actually performing the experiments (though there are some exceptions, such as time-course studies with lengthy time points). Rushing into the hands-on work without properly designing the study is a common mistake made by young researchers.
4. When designing your experiment, choose your materials wisely. Look to the literature to see what others have used. Similar products from different companies do not all work the same way. In fact, some do not work at all.
5. Get help. If you are performing research techniques for the first time, be sure to consult an experienced friend or colleague. Rookie mistakes are commonplace in academic research and lead to wasted time and resources.
6. Know what you want to study, WHY you want to study it, and how your results will contribute to the current pool of knowledge for the subject.
7. Be able to clearly state a hypothesis before starting your work. Focus your efforts on researching this hypothesis. All too often people start a project and are taken adrift by new ideas that come along the way. While ideas are good to note, be sure to keep your focus.
8. Along with keeping focus, know your experimental endpoints. Sometimes data collection goes smoothly and you want to dig deeper and deeper into the subject. If you want to keep digging deeper, do it with a follow-up study.
9. Keep in mind where you might like to publish your study. If you are aiming for a high-impact journal, you may need to do extensive research and data collection. If your goal is to publish in a lower-tier journal, your research plan may be very different.
10. If your study requires approval by a review board or ethics committee, be sure to get the documentation as needed. Journals will often require that you provide such information.
11. If your study involves patients or patient samples, explicit permissions are generally required from the participant or donor, respectively. Journals may ask for copies of the corresponding documentation.

General

12. Read and follow ALL of the guidelines for manuscript preparation listed for an individual journal. Most journals have very specific formatting and style guidelines for the text body, abstract, images, tables, and references.
13. HYPOTHESIS: be sure to have one and state it clearly. This is, after all, why you are doing the research.
14. Write as though your work is meaningful and important. If you don't, people will not perceive it as meaningful and important.
15. Use an external peer review service (available through JournalPrep.com) to get your manuscript reviewed prior to submission. Rapid and expert peer reviews, before you submit, may significantly increase your odds of getting your manuscript accepted for publication.
16. Critique your own work. Look for areas that reviewers might spot as weaknesses and either correct these areas or comment on them in your manuscript, leaving reviewers with fewer options for negative criticisms.
17. Always present the study as a finished piece of work (although you may suggest future directions). Otherwise, you can be sure reviewers will suggest additional research.
18. Be painstaking. Be thorough and patient with several rounds of editing of your work while considering all the tiny details of the specifications requested by the journal. It will pay off in the end.
19. Focus. If you have a hypothesis to develop, be consistent to the end. Have substantial and convincing evidence to prove your theories. Brainstorm your ideas and have a definite direction mapped out before beginning to write an article.
20. Write in a precise and accurate way. Avoid long sentences; the reader may find them difficult to follow.
21. Team-like spirit is an important attribute that contributes to successful publishing. Welcome advice from those around you with potentially valuable input. No matter how competent you feel, having your work seen through a different lens may help to spot flaws that you were unable to identify.
22. As a final step, after completing your research paper, edit, edit, edit. You need to identify and correct any and all mistakes that you may have made.
23. Short papers are more likely to be read than long ones.
24. Select a descriptive title. Flash and puns are rarely as appealing as they may seem at first. You are better off going simple and descriptive. This will also help you get cited.
25. Focus on the information the readers require when following your experiment, modeling description, or data analysis instead of overloading them with details that might have been important during the study but are irrelevant for them.
26. Your paper should advance a particular line of research. It does not need to answer every remaining question about the topic.
27. If you present your work at an academic conference prior to submitting it for publication, get

constructive criticisms from as many potential reviewers as possible.

28. Make sure your paper reads well. A bunch of choppy, simple sentences, while grammatically correct, is unpleasant to read.
29. Clear, concise, and grammatically correct English. Period.
30. Non-native English speakers should ALWAYS try to arrange for a review by a native speaker. If you know someone with excellent proofreading skills and a general knowledge about your research discipline (ex. Biological Sciences), ask them to help you out. If you don't know someone who meets these criteria, use a professional editing service such as that offered at JournalPrep.com. You will save yourself from a great deal of frustration and lost time.
31. Show friends and colleagues your work, including those in different fields of research. Get as much feedback as you can before you submit.
32. The body of the paper supports the central idea and must show a thoughtful, comprehensive study of the research topic; it should be clearly written and easy to follow. It generally includes three main parts: 1) Methodology, 2) Results & Data Analysis, and 3) Discussion.
33. When referencing other papers, do not simply reference work in the same way other papers have. If paper X says that paper Y showed a specific result, check for yourself to ensure that this is true before saying the same thing in your own manuscript. The number of reputable authors who misunderstand their colleagues' findings is shocking.
34. If you are in the process of running a follow-up experiment, write your manuscript in such a way that it begs for that experiment. When reviewers respond and request it you will already have it completed.

Introduction

35. Start your article with a comprehensive yet concise literature review of your exact subject and highlight in which way your paper will make a new contribution to the field.
36. Throughout your introduction use the past tense. One exception to this is when you are speaking about generally accepted facts and figures (ex. Heart disease is the leading cause of death...).
37. Avoid using new acronyms. They will simply confuse the readers.
38. The introduction of a research paper is extremely important. It generally presents a brief literature review, the problem and the purpose of your research work. It should be powerful, simple, realistic, and logical to entice the reader to read the full paper.
39. Avoid unnecessarily long paragraphs. Break up your paragraphs into smaller, useful units.
40. Do not be afraid to use headings in your introduction (and discussion).

Materials & Methods

41. Do not over-explain common scientific procedures. For example, you do not need to explain how PCR or Western Blotting work, just that you used the techniques. If you are using a novel technique, then you need to explain the steps involved.
42. Use third person passive tense. For example, "RNA was extracted from the cells." Compare this with, "We extracted RNA from the cells."
43. Be sure to mention from which companies you purchased any significant reagents for your experiments.
44. When in doubt about how to report your materials and methods, look to papers published in recognized journals that use similar methods and/or materials.
45. Do not mention sources of typical labware (beakers, stripettes, pipet tips, cell culture flasks, etc).

Results

46. Make sure your graphs and tables can speak for themselves. A lot of people skim over academic papers.
47. The Results section should contain only results, no discussion.
48. Do not repeat in words everything that your tables and graphs convey. You can, however, point out key findings and offer some text that complements the findings.
49. Be sure to number your figures and tables according to journal guidelines and refer to them in the text in the manner specified by the journal.
50. Clear to read graphs are essential. Do not overload graphs with data. Make sure axis descriptions are not too small.

Discussion

51. Your discussion section should answer WHY you obtained the observed results. Do not simply restate the results. Also address WHY your results are important (i.e. how do they advance the understanding of the topic).
52. If multiple explanations for your results exist, be sure to address each one. You can favor one explanation but be sure to mention alternative explanations, if some exist. If you don't, your reviewers will.

53. If your research findings are suggestive or supportive rather than decisive then make sure to indicate so. NEVER overstate the importance of your research findings. Rather, clearly point to their true significance.
54. Understand the message of your paper. You may discover what the message is only after a literature search, as is occasionally the case for some manuscript types such as case reports.
55. Highlight how your research contributes to the current knowledge in the field and mention the next steps or what remains. Feel free to explain why your results falsify current theories if that is the case.
56. Make sure that your discussion is concise and informative. If you ramble and include a great deal of unnecessary information, your paper will likely get rejected or at least be looked upon less favorably.

Conclusions & References

57. The importance of the conclusions section should not be overlooked. It includes a brief restatement of the other parts of the research paper, such as the methodology, data analysis and results, and concludes the overall discussion. It should be brief, concise, and worth remembering.
58. Reference page: All references used as sources of information in your research paper should be mentioned to strengthen your paper and also to avoid your work being considered plagiarized.
59. Failure to include every obscure reference to a topic will NOT prevent publication. What WILL prevent publication is procrastination by insisting on including such references.
60. Use bibliographic software such as EndNote or RefWorks. This will help you format your references section readily when you make changes throughout your paper after getting suggestions from friends, colleagues or reviewers.

Abstract

61. In your abstract, limit the amount of background information you provide. Try to give only what is necessary in a couple of sentences or less.
62. Never refer to figures or tables in your abstract.
63. When writing an abstract, always use the past tense since you are giving a summary of what was done. One exception is if you mention future directions in your concluding statement.
64. Write a clear and concise abstract. The reader has to understand the study rationale, the methods used, and the study findings. Many researchers will only ever read the abstract of your paper so it must contain the most pertinent information.
65. Be sure to check journal guidelines for abstract length. Many journals will not accept abstracts

longer than 200-250 words.

66. Feel free to hook readers with a “big picture” statement to open the abstract. Remember, many action editors will know very little about your topic area and, in some cases, your abstract will be the only thing that dictates whether or not you get through triage.

Journal Selection

67. The most common mistake to be made is not knowing the body of research in which an article fits. Wrong choice of journal for publishing spells outright rejection. Even if the article is very encouraging with sound and rigorous scholarly work, it will not stand the test.
68. Look at journals that have published articles on your topic previously. This is an encouraging sign that your work may appeal to the journal editors.
69. Look at journal impact factors. This will give you an idea of the quality of the journal and how difficult it will be to get your paper accepted.
70. Look at journal acceptance/rejection rates. These are sometimes, but not always, inversely correlated with impact factor values.
71. Look at average time to publication as well as average time to acceptance/rejection notification. If you want your work published fast then make sure you choose a journal that offers rapid processing. Some journals will highlight their rapid processing times as an impetus for authors to submit their work to those particular journals.
72. Some journals charge fees for manuscript processing or color figure reproduction for accepted manuscripts. Make sure you are familiar with the costs associated with publication before you submit your work.

Manuscript Submission

73. Look at papers recently published in your journal of interest. Ask yourself if your paper is of equal or higher caliber. If not, submit your work to a different journal.
74. Identify the journals related to your field of study and their individual focuses, and then select a journal with a focus similar to the content of your manuscript. Many journals will clearly describe their focus and scope on their website.
75. Consider your field of study. Every field of study has several different journals publishing information pertaining to that field. Knowing the names of those journals narrows your prospective playing field.
76. Select two or three journals with a focus similar to the content of your manuscript. While you are only going to be published in one, preparing multiple choices keeps you from having to duplicate the selection process immediately following your possible rejection.

77. Locate the contact information for each journal and any information pertaining to submissions. Make sure you get the most recent information, as the names of editors and submission policies can change over time and without warning.
78. Go over your manuscript to ensure it is formatted according to the submission guidelines, paying special attention to the references/bibliography, text formatting, and citation style.
79. Create your cover letter. This should include the name of the editor to whom you are sending your work, if available. While you want to be personable, you should avoid being too personal. This is a business communication, not a letter to your friend. Be sure to keep it professional. Include contact information for the editor in case he or she should wish to speak with you about your work.
80. Get your cover letter professionally edited. Cover letters are often the first thing that a journal editor will read. Your letter needs to be strong and impressive, as it can set the tone for the subsequent review process.
81. Submit your work. This could be done physically or electronically, depending on the submission guidelines of your selected journal. In the case of electronic submissions, some journals will accept attachments; others will not. Be sure to send your work in the correct format. If you are sending it physically, include a self-addressed, stamped envelope, either large enough to return your work in or just large enough for them to send you a letter.
82. Aim high but not too high. Aiming for top tier journals with research findings that are not groundbreaking will leave you with a lot of rejections and lost time.
83. Do NOT submit your article to more than one journal at a time. This is unethical and you will eventually get caught.
84. When uploading text, table and image files electronically, many submission systems will dynamically assemble your files into a single PDF document for easier handling. Be sure to review your PDF after it is generated to ensure that it looks correct and that all information has been included.
85. Respect word length. Many journals have specific requirements for word length for different document types (original articles, short reports, case reports, review papers, etc). If the journal says the word limit is 6000 then do not send a paper with 6100 words.
86. If a journal allows you to suggest reviewers for your manuscript, do so. This can work to your advantage. Suggest reviewers who know your field well and who might be interested in the results presented in your paper.
87. If a journal allows you to suggest reviewers who you do not want to review your paper, take advantage of this to make sure your work is not sent to someone in your field who may not see eye to eye with you, your supervisor, your lab, or your research in general.
88. If you definitely do not want your paper reviewed by specific individuals in your field, do not submit a paper to a journal where these individuals have published recently. Editors often look to people who have recently published on a similar topic in their journal to serve as reviewers.
89. If you think specific reviewers may look favorably upon your work, look to journals where they have recently published and submit your work there, if it is within scope. In doing so, be sure to reference these individuals in your manuscript whenever credit is due. There is nothing that angers peer reviewers more than reviewing an article in which their own work should be cited and is not.
90. Read the mission statement for the journal to which you will submit your work. If your paper is highly theoretical and the journal clearly states that it does not publish purely theoretical work, find a new

journal.

91. Email the editor to see if your manuscript topic is appropriate. Most will happily direct you elsewhere if it is inappropriate for their journal.
92. Look for journals that have issued calls for papers. They are more likely to look upon any work favorably.

Post-submission

93. When you get initial peer reviews, consider them carefully. In your resubmission cover letter, respond to each point made by each reviewer. Highlight the points you followed and the ones you did not (and indicate why).
94. When you are asked to perform additional studies, do them quickly and resubmit your manuscript as soon as possible.
95. If reviewers suggest changes/additional studies before the article can be published, respond to the editor indicating that you will address these suggestions so that they know your intentions.
96. Do not respond to reviewer comments in an argumentative tone. Be polite but straightforward. Feel free to disagree but be sure to have hard evidence to support your claims.
97. If accepted, be sure to carefully check page proofs and do so quickly. A 24-48 hour turnaround request is typical.
98. In responding to reviewer comments, it is a good idea to copy and paste the reviewers' comments verbatim in one color (e.g. black) and add your responses in another color (e.g. blue). You should also copy and paste any relevant sections from your revised manuscript into your cover letter. Ideally, a reviewer should be able to tell how adequately you have addressed their comments without having to read your revised manuscript.
99. Well-organized, well-written response letters can help a manuscript circumvent re-review. The editor will see the changes that you have made and may accept it outright.
100. Remember to select as many "Key Words" as possible. Many people do key word searches when performing literature reviews. This will increase the likelihood of your manuscript being read.
101. We want you, the reader, to send us your tips. If we like what you send us, it might just occupy position 101 on our list.

To all of the Journal Prep English editors and peer reviewers who contributed to this list - Thank you.