

Box 6. *Journal article checklist*

Title

- Does the title summarize the main result?

Abstract

- Does the abstract tell your story, very concisely?

Introduction

- Does the beginning of your introduction “hook” the reader by setting the stage for the question(s) your paper answers?
- Do you explain and justify your question(s) instead of just extolling the virtues of your study organism?
- Do you briefly summarize previous work that informs your current question(s)?
- Do you end your introduction by clearly listing the question(s) your manuscript addresses?

Methods

- Do you briefly explain the relevant natural history of your organisms or study system, if you haven’t already included it in your introduction?
- Do you describe your methods thoroughly enough that another ecologist could repeat your experiment, but briefly enough that space-pressured journals won’t send your manuscript back?
- Do you start the description of each experimental method with a phrase justifying why it was done?
- Do you include a brief explanation of each statistical procedure you used?

Box 6. Continued

- Do you include only the methods relevant to your overall story?

Results

- Are your results presented in a logical order to help your reader follow your story (not in the order in which you did your experiments, if that is different)?
- Have each of your results been presented once, and only once (in the text, a figure, or a table)?
- Does your text inform your readers of your results as much as possible, instead of simply referring them to your figures or tables?
- Do you describe your results in biological rather than statistical terms?
- Do you present effect sizes for each of your results?
- Do you present each of your results in terms of your overall story?

Discussion

- Do you restate your main results very briefly and interpret them?
- Do you generalize to larger ecological concepts where appropriate?
- Does the information in your discussion relate to your initial question(s)? Does your story seem cohesive?

Conclusion

- Do you hit your reader over the head one last time with your take-home message?

Figures and Tables

- Are your figures and tables as simple as possible?
- Do the titles and captions convey enough information that your reader can understand the meaning without referring to the text?
- Do your figures show error bars, if appropriate?
- Do your scatterplots include a line that describes the best fit, if appropriate?
- Do your figures have a legend identifying the treatments, if appropriate?
- Are your figures print-ready according to the web page of the journal to which you plan to submit?
- Have you trimmed your figures and tables to the lowest number possible to tell your story clearly?

English as a Second Language

- If you are not a native English speaker, have you gotten someone confident with English to review your writing?

Box 7. *Oral presentation checklist*

See also box 6, “Journal article checklist,” for reminders of good communication habits in ecology.

General Structure and Presentation

- Are you able to give your talk (from the slides or an outline) without reading it?
- Have you practiced making eye contact with your audience (instead of with your slides), moving about the room enough to keep your audience engaged, etc.?
- Have you carefully examined your talk for jargon you might not even realize you are using?
- If your talk includes an equation, have you planned how you will make it readily accessible to your audience?
- Do you present your information as one single, coherent story to help your audience follow you?
- Does your talk include signposts so that your audience follows the structure you have created?
- Do you use a large font size (24 point or larger) and include very few words (10–15 maximum) at a time per slide?

Introduction

- Do you structure your introduction around your take-home message?
- Do you eliminate most of the citations and other details you would include in a manuscript to help keep your audience’s attention focused?
- Do you end your introduction by showing an outline slide that clearly indicates the questions you will address?

Methods, Results, and Discussion

- Have you integrated your methods, results, and discussion in a way that makes your story easy to follow (even if that means doing a separate series of methods, results, and discussion for each question)?
- Have you minimized (that is, practically eliminated) your methods?
- Do you explain how the results of your first experiment generated your next question and experiment, so that your audience understands the relationship between the parts as the story develops?

Conclusion

- Do you leave your audience with one take-home message?

Figures and Tables

- Do you show your results in pictures and figures instead of just describing them?
- Do you minimize or eliminate the use of tables, since they are hard to grasp during a talk?
- When presenting your figures, have you planned to indicate to your audience what the x and y axes are?
- Are your graphics simple, so that each makes only one single point?

Preparing your Talk

- Have you practiced your talk (especially the introduction and conclusion) until you are absolutely comfortable with the information in it?

Box 7. Continued

- Have you created roughly one slide for each minute of your talk?
- Have you timed yourself to make sure your talk does not go overtime?
- Are you prepared to give your talk without any slides at all in case of a technical problem?

Box 8. Poster checklist

Refer also to box 6, “Journal article checklist,” for reminders of good communication habits in ecology. Because your poster will rely much more on pictures and figures than on words, you may especially want to refer to the section labeled “Figures and Tables” in box 6.

Title

- Does the title summarize the main result?

Introduction

- Do you limit the introduction of your question(s) to one or two sentences?
- Do you clearly present the question(s) your poster will answer?

Methods

- Is your methods section extremely brief?

Results and Discussion

- Are your results presented mainly as graphics (bar graphs, scatterplots, etc.)? Do you show the differences in treatments with photographs where appropriate?
- Do you briefly explain the significance of each result?
- Do you present each of your results in terms of your overall story?

Conclusion

- Do you include a sentence or two briefly answering the question(s) you posed at the start?

Box 8. Continued

General

- Does your poster contain only the headlines?
- Does your poster use variation in font sizes, font styles, and colors to help the viewer grasp your organization?

Box 9. *Grant and research proposal checklist*

Refer also to box 6, “Journal article checklist,” for reminders of good communication habits in ecology.

General

- Is your proposal novel and exciting, and have you explained why to your reader?
- Do you explain the value to the larger ecological community of your proposed work?
- Is your proposal simple and clear, easy enough for an exhausted non-ecologist to understand at the end of a long day?
- Is your proposal feasible, and have you explained this in a way that will be convincing to your readers? When possible, have you proposed to use established techniques and presented preliminary results?

Project Summary/Abstract

- Does your project summary capture the excitement of your proposed research?

Introduction

- Do you take extreme pains to justify your proposed work?

Objectives

- Do you state each of your objectives explicitly?
- Do you justify each of your objectives?
- Do you articulate hypotheses that address your objectives?
- Have you designed and described experiments that address your hypotheses and objectives?

Box 9. Continued

Interpretation, Significance, and Budget

- Do you describe how you will analyze your findings and evaluate each hypothesis?
- Do you highlight the significance of your potential findings?
- Do you include a budget, if appropriate?
- Are you truly excited to do the work if it gets approved?