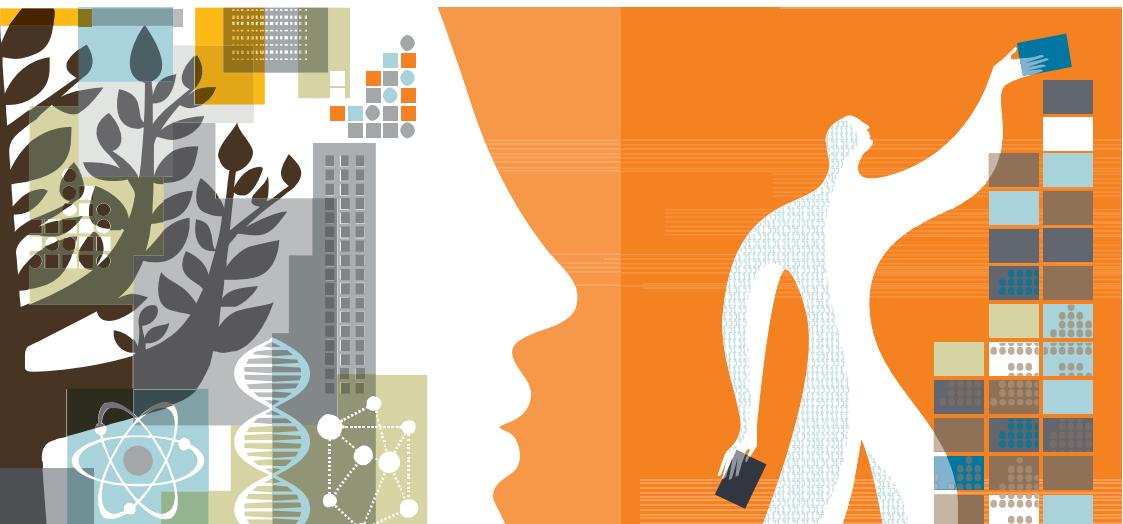


# Researcher Academy

## Elements of Style for Writing Scientific Journal Articles



**Stephen M. Griffies** NOAA/Geophysical Fluid Dynamics Laboratory, Princeton, NJ, USA  
and Associate Editor, *Ocean Modelling*

**William A. Perrie** Fisheries and Oceans Canada, Bedford Institute of Oceanography,  
Dartmouth, NS, Canada and Editor-in-Chief, *Ocean Modelling*

**Gaëlle Hull** Elsevier, Oxford, UK

[December 2013]



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## About this document

- We offer some rules for writing scientific journal articles.
- We focus less on the structure of an article, and more on styles and practices helping transfer scientific information, ideas, and understanding from the author to reader.
- Some material is borrowed from the classic Elements of Style by Strunk and White (1918, available at [http://en.wikisource.org/wiki/The\\_Elements\\_of\\_Style](http://en.wikisource.org/wiki/The_Elements_of_Style)) supplemented by experience from Editors of the journal Ocean Modelling.
- Further material is borrowed from the essay: The Science of Scientific Writing by Gopen and Swan, published in American Scientist in 1990. It is freely available at <http://www.americanscientist.org/issues/publications-of-scientific-writing>.

**We thank the following people for many useful comments and suggestions on drafts of this document:**

Venkatramani Balaji, Maria Benito-Herrero, Carolina Dufour, Blair Greenan, Bill Li, Joe Majkut and Liuqian Yu

## The most important rule

**Write for the busy reader who is easily distracted.**

- Most readers have little time to penetrate the full contents of an article.
- Readers will use almost any excuse to put down the paper, particularly when encountering poor writing that leads to reader fatigue and frustration.
- Make each sentence, paragraph, subsection, section, figure, derivation, etc. coherent and easily digestible nuggets of information.
- Your job as a writer is to communicate information and knowledge in a compelling and well written manner.

## INTRODUCTION

# Why you cannot ignore manuscript language

### Why is language important?

#### Poor language quality can delay or block publication.

It is important to take seriously the presentation of your manuscript, especially the language you use to communicate results. Clarity in writing reflects on clarity in thought. Science is far more than mere fact recording. Written communication is key to transmitting knowledge and rendering an impact on the field.

Without clear and proper language, readers will not grasp the full message or impact of your work. Even though the findings you report might be cutting edge, poor language quality, including errors in grammar, spelling or language usage, could delay publication or lead to outright rejection of the paper.

#### Always use proper English.

Use proper English throughout the entire manuscript, and do not forget the captions and headings in figures, charts, graphs, and photos.

### Do publishers correct language?

#### No; it is the author's responsibility... but resources are available.

Often authors assume that the publisher will correct the language of their manuscript after it has been accepted, but this assumption is not correct. It is actually the author's responsibility to make sure a paper is in the best form possible.

Doing so means correcting the rudimentary issues related to grammar and spelling, as well as providing a clear, logical, and connected story-line.

Though publishers do not correct language, they do often provide resources for authors who are less familiar with the conventions of international journals. Please check your publisher's Guide for Authors website for more information.

Some publishers may also perform technical screening prior to peer review. If the quality of the language of your paper does not meet a journal's minimum standards, it can be returned to you for improvement.

## SECTION I

# Basic rules of manuscript language

## Manuscript language: overview

Manuscript language should be:

→ Accurate → Concise → Clear → Objective

Prevent spelling errors by using a spellchecker in English. Additionally, other common language errors involve:

- Tenses
- Sentences
- Grammar
- Paragraphs

You should always read the journal's Guide for Authors to check for any additional language specifications.

## Manuscript language: tenses

Take care to use the proper tenses when describing your work and findings. Being consistent and correct in your use of tenses makes your paper easier to understand.

### Present tense:

Use the present tense for known facts and hypotheses, for example, "*the average life of a honey bee IS 6 weeks...*"

### Past tense:

Use the past tense for describing experiments that have been conducted and the results of these experiments, for example "*The average life span of bees in our contained environment WAS 8 weeks...*"

### Remember:

Avoid shifting tenses within a unit of text: paragraph, sub-section or section.

## Manuscript language: grammar

### Use the active voice to shorten sentences.

The passive voice can be used in the Methods section of a paper but otherwise, the active voice will usually shorten sentences and make them more dynamic and interesting for the reader.

Use the active phrase "*we found that...*" freely, which is a quick signal to the reader that you are describing one of your results. This expression is also much more concise and to the point than writing in the passive voice, as in, for example, "*it has been found that there had been...*"

## Avoid abbreviations and acronyms.

Avoid contractions such as "it's", "isn't", or "weren't" which are not often used in professional writing.

- Avoid abbreviations/acronyms except for very well-known ones.
- Avoid acronyms as replacement for citations.
- Avoid acronyms in the abstract and conclusion.

## Eliminate redundant words or phrases.

- |   |  |
|---|--|
| ■ <i>due to the fact that</i> → <i>because or since</i> | ■ <i>and also</i> → <i>and</i>                       |
| ■ <i>immediately apparent</i> → <i>apparent</i>         | ■ <i>in order to determine</i> → <i>to determine</i> |
| ■ <i>in the case that</i> → <i>in case</i>              | ■ <i>to try and determine</i> → <i>to determine</i>  |

## Double-check unfamiliar words or phrases.

## Manuscript language: sentences

To write a successful manuscript, first be aware of the **sentence structure** you use.

### Write direct and short sentences.

The average length of sentences in scientific writing is only about 12-17 words.

### Include only one piece of information per sentence.

Sentences should be constructed in short, factual bursts. Long and complicated sentences tend to confuse readers.

### Avoid making multiple statements in one sentence.

Convey only a single idea per sentence. Link sentences together within a paragraph to provide a clear story-line.

### Keep related words together.

Closely place the subject and verb to allow the reader to understand what the subject is doing.

### Pay attention to the order in which you write a sentence.

The "stress position" within a sentence contains new information to be emphasized. The "topical position" contains "old" information leading up to the point of emphasis. The topical position comes before the stress position.

**Avoid:** "*This ocean basin was warmer during 2012 than any period found in the observational database, based on our analysis of recent ship-based measurements.*"

**Write:** "*Based on our analysis of recent ship-based measurements, this ocean basin was warmer during 2012 than any period found in the observational database.*"

### Put statements in a positive form.

- Positive: "He usually came late."
- Negative: "He is not very often on time."

## Manuscript language: paragraphs

- Have one paragraph for each distinct topic.
- Begin a paragraph with a topic sentence, and end in conformity with the beginning.
- Avoid a succession of loose sentences.
- Parallel structures are simpler to parse as a reader. Retain consistent tenses within each paragraph.
- Provide a logical transition from one paragraph to another to render a clear flow, thus guiding the reader from one topic to another.
- Paragraphs are similarly constructed to sentences, bringing the reader from the "familiar" at the start to new ideas towards the end.
- Fill logical holes empathizing with a smart reader who genuinely wants to understand the flow of ideas.

## SECTION II

# Classic errors to avoid

## Avoid using "this" unqualified.

**Avoid:** "We found this to be the most important facet of the ocean's dynamical response."

**Write:** "We found this feature of the thermocline to be the most important facet of the ocean's dynamical response."

- What does "this" refer to? If the reader must guess, then the guess could be wrong.
- Even when it is "obvious" what "this", "that", "these", or "those" refer to, the author serves the reader well by clearly qualifying.

## Avoid too many successive prepositional phrases.

**Avoid:** "We ran a model simulation of the ocean for research into the evolution of the thermocline."

**Write:** "We ran an ocean model simulation to conduct research into thermocline evolution."

- Run-on prepositional phrases are awkward to read.
- They can rapidly lead to reader fatigue.

## Avoid subjective or redundant words or phrases that will date the paper.

- "high resolution"
- "new result"
- "latest finding"

## Avoid subjective or judgmental adjectives.

**Avoid:** "We use a simple model of the ocean's thermocline to describe the dynamical response."

**Write:** "We use an idealized model of the ocean's thermocline based on approximating the continuous stratification with two immiscible fluid layers to describe the dynamical response."

- "Simple" has meaning to the reader only when the authors explain the opposite "complex" or "realistic" or "complete".
- Readers should not be asked to read the mind of the authors, nor to share the authors' opinion.

## Avoid expressions of belief.

**Avoid:** "We believe this model result to be true."

**Write:** "We show through our analysis that this model result is consistent with the empirical evidence."

- Communication of science is not about conveying belief.
- Rather, it is about logically developing lines of evidence that lead one to a hypothesis, theory, or conclusion based on the evidence.

## Avoid loose statements and back to back adverbs.

**Avoid:** "The ocean model simulation ran quickly and cheaply."

**Write:** "The ocean model simulation required 1200 hours using 100 computer processors."

- What is "quickly" and "cheaply"?

## SECTION III

# Always remember your reader

### Abstract: the key points

- The abstract provides a concise summary of the key aims and results.
- If it is not clear and interesting, readers often will read no further.

### What am I about to read?

#### The introduction

- The introduction should lay the ground-work for why the paper is worth reading, and describe where the work fits within the existing literature.
- Introduce the novel elements of the paper in the introduction, thus providing motivation for the reader to penetrate the main text.
- Do not over-burden the reader by making the introduction too long. Get to the key parts of the paper sooner rather than later.

### What did I just read?

#### The discussion and conclusion

- Readers need to know what they have read and why it was significant.
- Remind the reader why this paper was worth reading and publishing.
- Concluding sections also provide a venue to set the stage for future research directions.

## SECTION IV

# Cross-references and figure captions

## Thorough cross-referencing

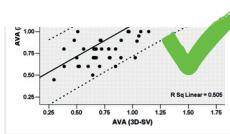
- Cross-reference equations, figures, and sections both by their number and by their name.

$$\frac{d}{dx} J_{\rho}(x) + \Sigma_{\rho g}(x) \delta_g(x) = \sum_{g=1}^G \Sigma_{g\rho}(x) \delta_{g\rho}(x) + \frac{\chi_g}{k_g} \sum_{\rho' \neq \rho} \nu \Sigma_{\rho\rho'}(x) \delta_{\rho\rho'}(x); \\ g = 1, 2$$

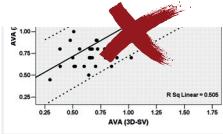
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$$\frac{d}{dx} J_{\rho}(x) + \Sigma_{\rho g}(x) \delta_g(x) = \sum_{g=1}^G \Sigma_{g\rho}(x) \delta_{g\rho}(x) + \frac{\chi_g}{k_g} \sum_{\rho' \neq \rho} \nu \Sigma_{\rho\rho'}(x) \delta_{\rho\rho'}(x); \\ g = 1, 2$$

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- Asking the reader to page back in the text intensifies reader fatigue.
- Put your head in the reader's head to determine when it is useful to provide "hand-holding" in a discussion or a derivation, whereby you identify useful cross-referencing.

## Figures and captions

Figures can be the most important part of a paper. Produce clear and high quality figures along with thorough captions.

- Avoid excessive numbers of figures: judiciously select those figures that clearly support the presentation.
- Allow the reader to digest a figure's main points without reading the text.
- Produce high quality figures, even on the first submission!

When available, embed figures within main text of the submitted manuscript to avoid reviewers needing to page back/forth, which in turn breaks the reading.

SECTION V

# Writing & rewriting - playing the peer-review "game"

## Extensive fine-tuning

Write science as E. Hemingway wrote his literature. Scientists are storytellers too!

*"My aim is to put down on paper what I see and what I feel in the best and simplest way."*

E. Hemingway

- Can you identify the beginning, middle, and end?
- What is the "take home message" or "iconic figure" of your paper?
- Be aware of each word forming a sentence; each sentence forming a paragraph, each paragraph forming a section...

**Edit → Read → Edit → Read → Edit → etc.**

- Consider the manuscript from a different perspective between each Edit → Read cycle: e.g., read in a different location; read it as an interested and smart non-expert. Patience will reduce time with reviewers/editors, and will enhance the paper's readability and impact.
- Solicit "friendly" reviewer comments from colleagues, and be sure co-authors have read the manuscript. Ask readers to comment on the "style" of the manuscript as well as the substance.
- Writing rules can be selectively broken without sacrificing clarity. But it is important to know and to respect the rules so to understand when they are usefully broken.

## Honestly deal with mistakes.

There are times when the reviewer (or the author!) identifies a significant problem/mistake during the review process.

- Mistakes are embarrassing. But they are far more embarrassing if published! So be thankful the mistake was found during review.
- If the basis for the paper is undermined by a mistake, then do not try to justify publishing. There may be another path towards a publishable story.
- Avoid publishing an incomplete or half-baked story. Readers will be reticent to read your next paper.
- Quality over quantity is the ideal.

## And finally: Do not give up if you believe in your work.

Reviewers are generally not as knowledgeable on the subject of the manuscript as the author.

- Some influential papers that break new scientific ground may be rejected merely because reviewers do not appreciate the results. Be patient and persistent.
- Nonetheless, reviewer comments are almost always useful, even if they are wrong!
- Some critical or wrong reviewer comments result from poor writing that leads to reviewer misunderstanding and reviewer frustration. Rethink your writing.
- Let comments sit, especially negative or harsh comments. A poorly written rebuttal can lead to needless (and sometimes emotional) correspondence with the editor and reviewer.



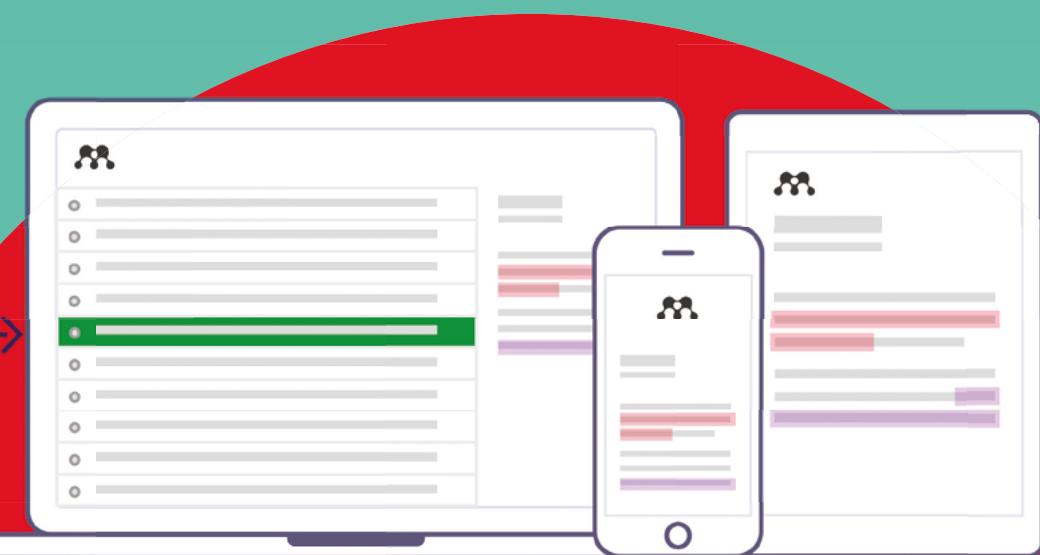
UNDERSTANDING THE PUBLISHING PROCESS

# How to publish in scholarly journals



[elsevier.com/authors](http://elsevier.com/authors)





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ELSEVIER



# How to publish in scholarly journals

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## UNDERSTANDING THE PUBLISHING PROCESS

# How to publish in scholarly journals

## Introduction

| 1

As researchers, you make huge strides in advancing essential knowledge. Your achievements can save lives and improve the way we live. If you're ready to share your knowledge with the world, this booklet outlines the best opportunities for publishing your research – and for seeing it shared globally.

The first question to ask yourself is, 'do I have a story to tell?'. Editors and reviewers look for original and innovative research that adds to their field of study, or immediately impacts patient care. This means that your conclusions must be sound and based on sufficiently robust data.

Secondly, ask yourself, 'is there an audience for my research findings?'. The more original and innovative your research, the more people will be interested. Consider whether your research is of interest to a local, regional or international audience. Identifying your audience is a major factor in selecting the right journal to submit your manuscript to. You can read more about selecting a journal in *section 2.2*.

### There are several types of research articles:

1. **Letters and rapid or short communications** are intended for the quick and early communication of significant or original advances, without including too much data or detail.
2. **Review papers** summarize recent developments on a specific topic, without introducing new data.
3. **Full articles** contain significant data, detail, developments and outcomes.
4. **Research elements** enable you to publish research output, such as data, software, methods, videos and much more, in brief, citable articles.

If you're unsure which type of article to write, discuss your options with your supervisor or colleagues. For the purposes of this booklet, we offer guidance for writing and publishing a full article. Once you've decided to write a full article, follow the guidelines of your chosen journal, and the general guidelines for scientific writing outlined in the following sections.

## 2.1 INTRODUCTION

Finding the right journal for your article can be key to reaching your target audience.

- Take into consideration the type of article you'd like to publish (full length, letter, review, research output).
- Check the references in your article, to give an indication of possible journals of interest.
- Read the journal's aims and scope on the journal homepage on [elsevier.com](https://elsevier.com).
- Read or download the journal's Guide for Authors.
- Check if the journal is invitation-only; some journals only accept articles after inviting the author to submit.
- Check the journal's performance for review and publication timelines (*see 2.3*).
- If you need to publish open access, remember that most Elsevier journals explain their open access options on the journal homepage (*see 2.4*).
- Submit your paper to only one journal at a time (*see 3.6, on ethics*).

## 2.2 JOURNAL FINDER

The Journal Finder tool locates Elsevier journals that most closely match your abstracts. An Elsevier journal will be recommended if it has published articles that are highly similar to your article. A list of relevant articles is generated, and the tool can filter on your preferred criteria, such as open access options, journal metrics, review time, acceptance rate and production time. See [journalfinder.elsevier.com](https://journalfinder.elsevier.com).

## 2.3 JOURNAL METRICS

Journal metrics are at your disposal to help you select the most appropriate journal for your article. When used alongside information about the journal's scope, editorial board, international outlook and audience, they can help you to find the best destination for your research.

### Different types of journal metrics

It's good practice to look at more than one metric to help you make your decision. You'll find a dedicated Journal Insights section on many of the journal homepages on [elsevier.com](https://elsevier.com), giving information about the journal's:

- **Speed** – review speed and online publication time
- **Reach** – geographic location of corresponding authors and journal usage
- **Impact** – impact metrics based on citations received by articles

### Citation-based impact metrics

The average impact of all the articles in a journal is often used as a proxy for the impact of a specific article – especially when the article hasn't yet had time to accumulate its own citations. It's important to take this kind of proxy metric into consideration.

The Journal Insights section on the Elsevier.com journal homepage has several impact metrics to be aware of:

	CiteScore*	SNIP	SJR	Impact Factor
Full name	CiteScore	Source-Normalized Impact per Paper	ScImago Journal Rank	—
Measures	Average number of citations received in a calendar year by all items published in that journal in the preceding three years.	Citations relative to average for discipline; SNIP > 1 means journal is cited more than average for field	Average prestige per publication, depending on the SJR of the citing journal	Average citations per publication
Accounts for varying journal size?	Y	Y	Y	Y
Accounts for varying behaviour between disciplines?	N	Y	Y	N
Availability	CiteScore, SNIP and SJR are available on Scopus and can be accessed freely  Free of charge at <a href="http://journalmetrics.scopus.com">journalmetrics.scopus.com</a>  Free of charge via individual journal homepages: Journal Insights			Thomson Reuters  Free of charge via individual journal homepages: Journal Insights.

\***NEW:** CiteScore is a simple way of measuring the citation impact of serial titles such as journals. Serial titles are defined as titles which publish on a regular basis (i.e. one or more volumes per year).

CiteScore calculates the average number of citations received in a calendar year by all items published in that journal in the preceding three years.

## 2.4 OPEN ACCESS OPTIONS

In general, open access indicates free and permanent access to published research, combined with clear guidelines for readers to share and use the content. There are two main types of open access: gold and green.

### What is the difference between gold and green?

	GOLD OPEN ACCESS	GREEN OPEN ACCESS
Access	<ul style="list-style-type: none"> <li>• Free public access to the final published article</li> <li>• Access is immediate and permanent</li> </ul>	<ul style="list-style-type: none"> <li>• Free public access to a version of your article</li> <li>• Time delay may apply (embargo period)</li> </ul>
Fee	<ul style="list-style-type: none"> <li>• Open access fee is paid by the author, or on their behalf (for example by a funding body)</li> </ul>	<ul style="list-style-type: none"> <li>• No fee is payable by the author, as costs are covered by library subscriptions</li> </ul>
Use	<ul style="list-style-type: none"> <li>• Determined by your user license</li> </ul>	<ul style="list-style-type: none"> <li>• Authors retain the right to use their articles for a wide range of purposes. All open versions of your article should have a user license attached</li> </ul>
Options	<ol style="list-style-type: none"> <li>1. Publish in an open access journal</li> <li>2. Publish in a journal that supports open access (also known as a hybrid journal)</li> </ol>	<ol style="list-style-type: none"> <li>1. Link to your article</li> <li>2. For selected journals Elsevier makes the articles freely available after an embargo period in the open archives</li> <li>3. Self-archive your manuscript</li> </ol>

Some funding bodies or institutions have a policy on public access to research. It's important to know the open access policy of your institution or funding body before you decide whether or not to publish open access. Elsevier offers a wide range of publication options for your research to comply with funding policy or institutional mandates. Elsevier publishes more than 400+ gold open access journals and offers options to publish open access in more than 1,600 subscription journals. For more information on your open access options, see [elsevier.com/openaccessoptions](http://elsevier.com/openaccessoptions).



## 3.1 YOUR MANUSCRIPT

### Title

The title is the main advertisement for your article. A great title entices the audience to read on; a poorly-titled article may never reach its target readers.

Your article's title should reflect its content clearly, enabling readers to decide whether it's relevant for them. Make the title catchy and keep it specific. Leave out phrases such as 'a study of', 'investigations into', 'observations on'; and avoid using abbreviations and jargon.

Remember, too, that abstracting and indexing services depend on accurate titles; they extract keywords from them for cross-referencing.

**Why '*The effect of heating the albumen and vitellus of the Gallus gallus domesticus contained in calcium carbonate in H<sub>2</sub>O to 373.15 K* when '*Boiling a chicken egg in water*' says it?**

Essentially, effective titles:

- Identify the article's main issue.
- Begin with the article's subject matter.
- Are accurate, unambiguous, specific and (when possible) complete.
- Are as short as possible.
- Are enticing and interesting; they make people want to read further.

### Authors

Only authors who've made an intellectual contribution to the research should be credited; those who'll take responsibility for the data and conclusions, and who've approved the final manuscript. The order of credited names can vary between disciplines; the corresponding author may not always be the first author.

### Keyword list

Most journals request a list of keywords; important words that, along with those in the title, capture the research effectively. Keywords are used by abstracting and indexing services; choosing the right ones can increase the chances of your article being found by other researchers. Many Elsevier journals also ask for a subject classification during the online submission process; this helps editors to select reviewers.

### Abstract

The abstract is your chance to describe your research in 200 words – so use it wisely. Together, the title and abstract should be able to fully represent your article, including for use by indexing services. Many authors write the abstract last, so it reflects the content accurately.

The abstract should summarize the problem or objective of your research, and its method, results, and conclusions. Usually an abstract doesn't include references, figures or tables. It should mention each significant

---

section of the article, with enough detail for readers to decide whether or not to read the whole paper. While it's great to make the abstract interesting, above all it should be accurate. Don't promise more than your article delivers.

### **The body of the text**

Make the introduction brief. It should provide context and background, but not be a history lesson. It should state the problem being investigated, its contextual background, and the reasons for conducting the research. State the questions you're answering and explain any findings of others that you're challenging or furthering. Briefly and logically lead the reader to your hypotheses, research questions, and experimental design or method.

### **Method**

(*also called Materials and Methods or Experimental Methods*)

This section should be detailed enough that readers can replicate your research, and assess whether the methods justify the conclusions. It's advisable to use the past tense – it's about what you *did* – and avoid using the first person, although this will vary from journal to journal. Ultimately, you should explain how you studied the problem, identify the procedures you followed, and structure this information as logically as possible.

If your methods are new, you'll need to explain them in detail. If they've been published before, cite the original work, including your amendments if you've made modifications. Identify the equipment and the materials you used, specifying their source. State the frequency of observations and what types of data were recorded. Give precise measurements, stating their strengths and weaknesses when necessary. Name any statistical tests, so your quantitative results can be judged.

If your research involved human participants, animals, stem cells or other biohazard materials, you'll need to include certain information in the ethics statement, such as committee approvals and permission to publish. You should also explain your criteria for selecting participants.

### **Results**

This section should present your findings objectively, explaining them largely in text. It's where you show how your results contribute to the body of scientific knowledge, so be clear and logical. And it's important not to interpret your results – that comes in the Discussion & Conclusions section.

You can base the sequence of this text on the tables, figures and graphs that best present your findings. Emphasize any significant findings clearly. Tables and figures must be numbered separately; figures should have a brief but complete description – a legend – that reveals how the data was produced.

### **Discussion & Conclusions**

This is where you describe the meaning of your results, especially in the context of what was already known about the subject. You can present

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general and specific conclusions, but take care not to summarize your article – that's what the abstract is for.

You should link this section back to the introduction, referring to your questions or hypotheses, and cover how the results relate to your expectations and cited sources. Do the results support or contradict existing theories? Are there any limitations? You can also suggest further experiments, uses and extensions.

Above all, the discussion should explain how your research has moved the body of scientific knowledge forward. Your conclusions must be supportable and not extend beyond your results, so avoid undue speculation and bold judgments about impact. This is also a good place to suggest practical applications for your results, and to outline what the next steps in your research will be.

To summarize, make sure that:

- Your results directly support your conclusions.
- You use specific expressions and quantitative descriptions – ‘12 degrees higher’ instead of ‘a higher temperature’.
- You only discuss what you defined early in the paper – don’t introduce the reader to a whole new vocabulary. If you missed an important term, go back to the introduction and insert it.
- All interpretations and speculations are based on fact, not imagination.

### Acknowledgments

Keep acknowledgements brief, naming those who helped with your research; contributors, or suppliers who provided free materials. You should also disclose any financial or other substantive conflict of interest that could be seen to influence your results or interpretations.

### References

New research builds on previously published work, which should always be acknowledged. Any information that isn't 'common knowledge', or generated by your experiments, must be recognized with a citation; and quoted text should be within quotation marks, and include a reference. The format of citations and references varies, so you should refer to the Guide for Authors for the journal you're submitting to.

## 3.2 LANGUAGE QUALITY

A scientific article should report your findings and conclusions as clearly and concisely as possible. To achieve this:

- Try to avoid unnecessary words or phrases – keep it simple.
- Use active writing when possible. For example, ‘Carbon dioxide was consumed by the plant’ is passive. Active writing shortens this phrase to, ‘The plant consumed carbon dioxide’ – which is much snappier.
- Tense is important. For known facts and hypotheses, use the present tense: ‘The average life expectancy of a honey bee is six weeks.’ But use the past tense when referring to experiments you've conducted: ‘All the honey bees were maintained in an environment with a consistent temperature of 23°C.’ And also use the past tense to describe results: ‘The average life span of bees in our contained environment was eight weeks.’

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PROF. CHEN JING,  
Beijing Normal University, China

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Submitting any illustrations, figures or other artwork – like multimedia and supplementary files – in an electronic format means that we can produce your work to the best possible standard, ensuring accuracy, clarity and a high level of detail. For specific details on how to format and submit artwork, check [elsevier.com/artwork](http://elsevier.com/artwork).

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### 3.4 ADDING RESEARCH DATA

Research data forms the backbone of your research article and provides the foundation on which scientific, technical and medical knowledge is built.

As a researcher, you are increasingly encouraged, or even mandated, to make your research data available, accessible, discoverable and usable.

As an author, you can choose to store your data in a repository, like Mendeley Data: [data.mendeley.com](http://data.mendeley.com), to make your dataset independently citable and link it with your article. You can also choose to submit a brief, peer-reviewed data article. Your data article will be indexed and linked with your original research article.

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#### 3.4.1 DATA VISUALIZATIONS

You can enrich your article with interactive visualizations and provide context by adding references to (external) information sources, such as high resolution imagery viewer, geospatial maps and 3D models. This makes your research data and key findings comprehensible for your readers next to your article. Find out what options are available: [elsevier.com/authors/author-services/data-visualization](http://elsevier.com/authors/author-services/data-visualization).

#### 3.4.2 DATA STATEMENT

Elsevier journals and many others provide guidelines on data sharing. There can be reasons why you are not able to share your research data, for example due to confidentiality reasons. In this case you can submit a data statement with will appear next to your article and states the reason why your dataset is not linked to your article.



"With *Data in Brief*, many developments in research can become more useful when data sources are shared."

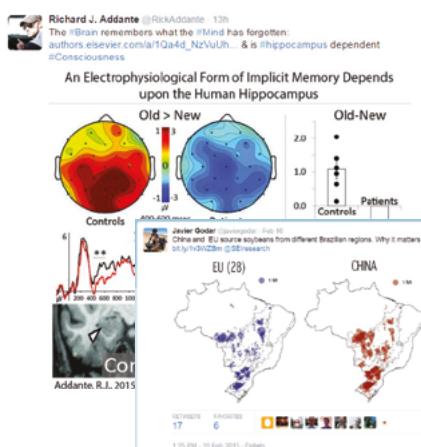
We are excited and grateful for the opportunity to have our data accessible at no cost to the community."

PROF. BARRAZA-LOPEZ,  
Department of Physics, University of Arkansas



"The reader also gets a quick grasp about the paper that cannot be explained in a short written abstract"

TILBE GÖKSUN,  
Assistant Professor of Psychology at Koç  
University, Istanbul on creating her AudioSlides



Tweeted graphical abstracts

### 3.5 ENRICH YOUR ARTICLE

You can additionally prepare article enrichments which promote your research in alternative formats, such as a slide presentation, knowledge quiz or promotional video like AudioSlides.

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#### 3.5.1 AUDIOSLIDES

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#### 3.5.2 GRAPHICAL ABSTRACTS

A Graphical Abstract is a visual summary of the main findings of the article that is placed as part of your article on ScienceDirect and will turn up in online search result lists. It will help people to understand the key point of your article at a glance. You can make use of our professional illustration services at the Elsevier webshop: [webshop.elsevier.com](http://webshop.elsevier.com).

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### 3.6 ETHICS

Understanding the boundaries in scientific research and publishing is a key step in making sure your work gets off to the best start. Scientific misconduct and breach of publishing ethics can take different forms, and be committed knowingly or unknowingly. Examples of misconduct and breaches include:

- **Authorship disputes** – deliberately misrepresenting a scientist's relationship with published work.
- **Competing interests** – not disclosing to a journal that you have a direct or indirect conflict which prevents you from being unbiased.
- **Plagiarism** – passing off another's work or idea as your own.
- **Simultaneous submission** – submitting a paper to more than one publication at the same time.
- **Research fraud** – including fabrication (making up research data) and falsification (manipulating research data, tables or images).
- **Salami slicing** – the 'slicing-up' of research that would form one meaningful paper into several different papers.

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The Ethics in Research & Publication Program is a collaboration between Elsevier and an independent panel of experts in research and publishing ethics. The program's online resources and tools have been developed to help you feel confident that you're doing the right things. See [ethics.elsevier.com](http://ethics.elsevier.com).

### **3.7 SEO YOUR ARTICLE**

Search Engine Optimization (SEO) helps to ensure that your article appears higher in the results returned by search engines such as Google. This can mean you attract more readers, gain higher visibility in the academic community, and potentially increase citations.

Tips for SEO include:

- Use keywords, especially in the title and abstract.
- Add captions with keywords to all photographs, images, graphs and tables.
- Add titles or subheadings (with keywords) to the different sections of your article.
- Make sure you place links to your article from relevant websites e.g. your institute's website, Wikipedia, LinkedIn, blogs and social media.

# Submit and revise your paper

| 4

Once you've checked (and re-checked!) your manuscript, you're ready to submit it to the journal editor via the submission and peer review system.

## 4.1 HOW TO SUBMIT A PAPER?

Elsevier's Editorial System (EES) has transitioned to Evide®, a fully online workflow for article publication. Submission is simple: direct links for registration and log-in can be found in our journals' Guide for Authors.

## 4.2 PEER REVIEW

After submission, each manuscript is checked for plagiarism, and assessed carefully to determine if it fits the aims and scope of the journal. If journal representatives are enthusiastic about the work, the journal editor will appoint reviewers.

### What does the peer reviewer do?

Reviewers help determine the validity, significance and originality of the work, and can suggest improvements to the manuscript and the research. On their recommendation, editors will accept, accept with revisions, or reject a manuscript.

To make good judgments, peer reviewers use their own checklists to evaluate the content for scientific value and originality, to see that articles adhere to general scientific practice as well as the journal's specific guidelines, and to check that you've referenced correctly. The peer reviewer will look closely at your methodology and the validity of your data, and consider your ethical approach. They will then recommend changes before your manuscript is published. See [elsevier.com/reviewers/home](http://elsevier.com/reviewers/home) for more details.

### Different types of peer review

Type of review	Description
Single blind (most common)	Reviewer identity hidden from author; reviewer knows identity of authors
Double blind	Both reviewer and author remain anonymous to each other
Open	Reviewer and author are known to each other

## 4.3 ARTICLE TRANSFER SERVICE

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## 4.4 CHECK THE STATUS OF YOUR PAPER

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If your paper is accepted for publication, you can follow the publication status through to completion using the 'track your article' feature. You'll receive a reference number and link via email, after final decision.

# After acceptance: article in press, proofing, share link and offprints

| 5

**Congratulations! Your article has been accepted!**

There are a few more things to consider that can optimize the publication of your work. Elsevier will do everything it can to have your article published as quickly and accurately as possible.

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Accepted articles are published online on ScienceDirect as an ‘article in press’, and assigned an issue at a later date. You can track your article and citations throughout this process.

## 5.2 PROOFING

Accurate proofreading and clear marking of corrections are essential for the production of a quality article. As soon as your article has been typeset, you’ll receive an email with either a PDF attachment of your article or a link to it on our online proofing system.

## 5.3 SHARE LINK AND OFFPRINTS

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**Anna Jacob Egalite** @annaegalite · Feb 27

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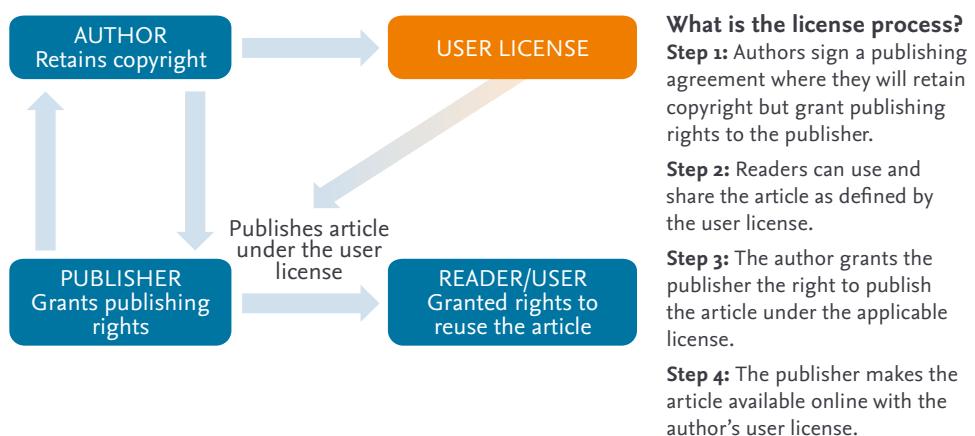
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| 7

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Finally, keep your SCOPUS and ORCID author profiles up-to-date so others can find your journal. You can now update both at [orcid.scopusfeedback.com](http://orcid.scopusfeedback.com). Just follow the easy online steps.

## 7.3 CONFERENCES

Presenting and networking personalizes your work, giving it a face and voice, and can create new opportunities for collaboration. Make sure you connect with other delegates on Facebook and LinkedIn, and direct them to your website or blog. If you create a poster for a conference, post it on

your website and provide links on your blog, social media profiles, online CV, or institutional page.

#### **7.4 SOCIAL MEDIA**

Every day, scholarly articles receive thousands of new mentions across social media, news and blogs; it's a powerful medium for reaching your potential readers! However, you don't have to be active on all social media – it's often best to find one or two channels which suit you and your purposes. Some of the most widely-used media are Facebook, Twitter and LinkedIn.

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#### **7.6 MEDIA RELATIONS**

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Remember to also get in touch with the press office at your institute to see what they can do to help you promote your paper.

Article by Vivian Kouri et al. published in open access journal *EBiomedicine* featured on CBS News

## 8.1 INTRODUCTION

It's worth bearing in mind that your peers and tutors monitor your impact. Being aware of this helps you to submit your article to the most appropriate place (section 2.3), and also to position yourself by proactively supplying information about your own performance.

Just like when you're considering where to publish, the best approach to monitoring your impact is to have multiple ways of assessing your performance.

If you're at an early stage in your career, you can use metrics that don't require longer timeframes:

- **Collaboration** – how big is your network? What's the status of colleagues in your network? Where in the world are they located?
- **Scholarly output** – how productive are you?
- **Usage** – how often have your publications been viewed?
- **Article metrics** – who's talking about papers online and what's being said?
- **Journal status** – what's the status of the journals that have published your work? The average citation impact of all the articles in a journal is a useful proxy for the impact your articles will achieve when they've had time to accumulate citations.

When you're at a later stage in your research career, with a sizeable output and an impressive number of citations, further metrics can then become useful:

- **Citation count** – how many citations have your articles received?
- **Outstanding articles** – which of your articles are in the top percentile of comparable articles?
- **h-index** – this rates your entire publication career based on both output and citation impact. (An *h*-index of 11 indicates that 11 of a researcher's articles have each received at least 11 citations.)



"Once authors have published in an Elsevier journal, they come back because of the other things Elsevier does for them: Mendeley Stats, the support for how to get the word out, how do you deal with media, how do you look at the impact of what you've done."

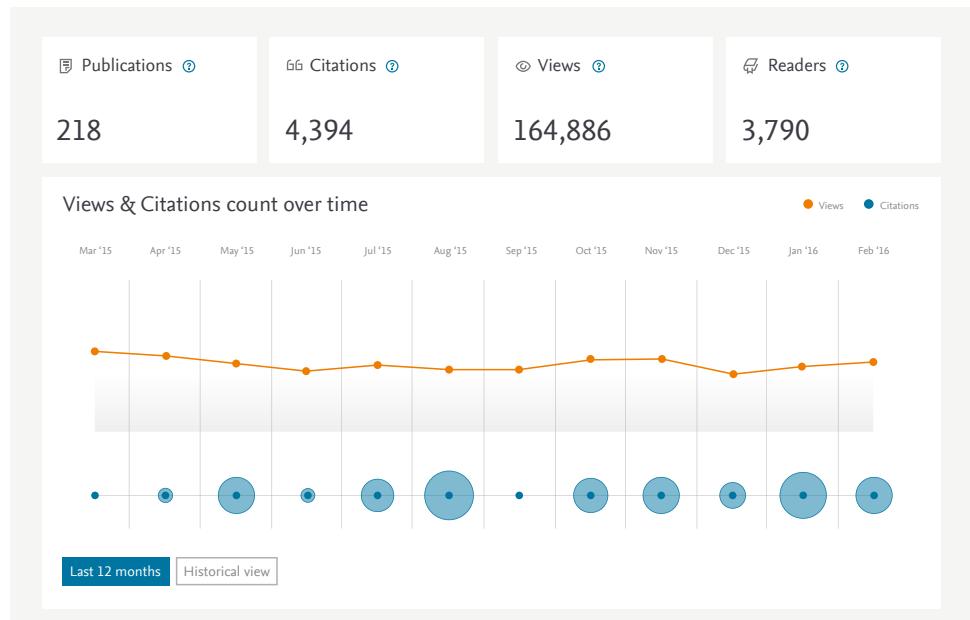
DR. BARBARA YAWN,  
Director, Department of Research, Olmsted  
Medical Center; Adjunct Professor, University of  
Minnesota; Chief Editor, Respiratory Medicine  
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## 8.2 MENDELEY STATS

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- Data about the geographic locations and research disciplines of your readers.
- Detailed information about search terms used in ScienceDirect to find your publications.
- A comparison of the performance of your article with other articles.

Have you not been invited to register for your personal dashboard yet? Don't worry, as it will certainly happen soon. You can also easily register via [mendeley.com/stats](https://mendeley.com/stats).



*Mendeley Stats: A personal and real time feedback service to authors. Combining metrics dating back 10 years. Including Elsevier and non-Elsevier publications.*

### 8.3 ARTICLE METRICS

Who's talking about papers online and what's being said? Article metrics allow you to track and analyze online activity around your article.

Online article mentions are monitored from social media sites (e.g. Twitter, Facebook, Google+), science blogs, many mainstream media outlets (including the NY Times, The Guardian, non-English language publications like Die Zeit and Le Monde, and special interest publications like Scientific American, and New Scientist) and reference managers for mentions of academic papers.

Via our journal homepages we will show Top-10 lists of popular articles. Any article covered on Scopus will both show article metrics and percentile comparisons to articles of the same type and age. Metrics will only be displayed if data is available.

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DR. GREGORY POLAND,  
*Editor-in-Chief Vaccine*



"The idea that you can find and publish 'hidden gems' from your lab book really resonated with us.

It allowed us to publish a useful finding that may otherwise have stayed in the lab book or been buried in another manuscript."

DR. KEIRA. MELICAN,  
*author and a member of the MethodsX advisory board from Karolinska Institutet, Stockholm, Sweden on the new microarticle journal MethodsX*

## 9.1 INTRODUCTION

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Scopus is the largest abstract and citation database of peer-reviewed literature – scientific journals, books and conferences – and features tools to track, analyze and visualize scholarly research. Its vast database contains abstracts and references from more than 21,000 titles, obtained from over 5,000 publishers worldwide, ensuring broad interdisciplinary coverage in the fields of science, technology, medicine, social sciences and the arts and humanities.

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### 9.5 MENDELEY

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PROF. DR. ANNE MARIE OUDE SLUYS,  
Department of Pediatrics, Leiden University  
Medical Centre, on a Researcher Academy  
webinar.

## Further information and training

10

### 10.1 RESEARCHER ACADEMY

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For more information see [elsevier.com/authors-update](http://elsevier.com/authors-update).

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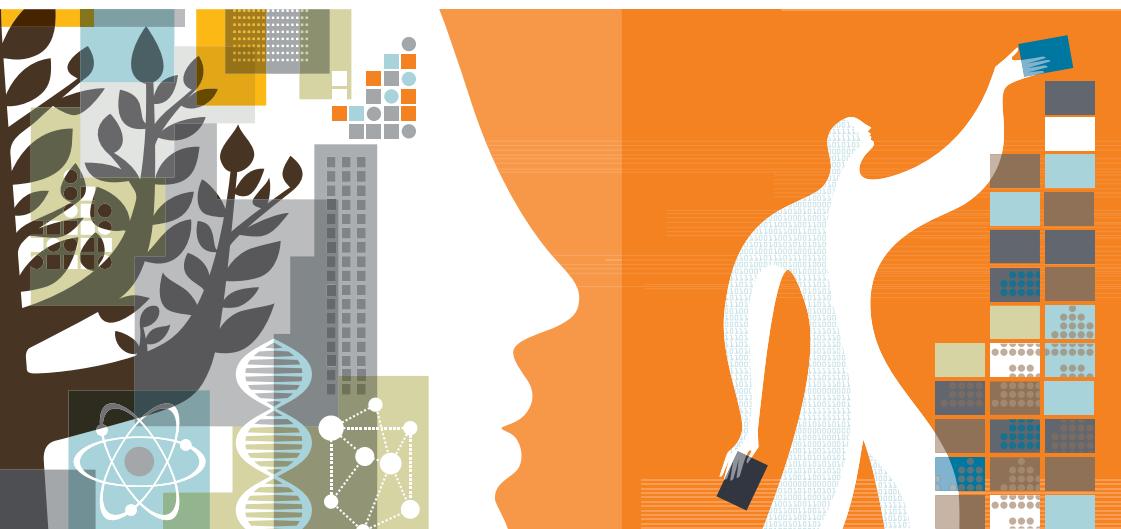


[April 2018 - supersedes previous versions]

# Researcher Academy

UNDERSTANDING THE NEEDS OF YOUR  
MULTIDISCIPLINARY AUDIENCE

## Preparing to write for an interdisciplinary journal



Investigating Interdisciplinary Research Discourse Project



UNIVERSITY OF  
BIRMINGHAM

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A cooperation between the Centre for Corpus Research, University of Birmingham, and the international scientific publisher, Elsevier. The project focused on the discourse of interdisciplinary research. We investigated the extent to which interdisciplinary research fields operate as a unified whole and, in contrast, the extent to which disciplines maintain their discrete identities in interdisciplinary discourse. Find out more: <http://idrd-bham.info/idrd/>

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## 1. About this guide

As a researcher, you may have a story to tell that contributes not just to members of your own specific field of study, but that is of interest to a wider international multidisciplinary audience.

*“One of the interesting challenges is to work out how you can get into a particular journal and what you need to be doing to make it appealing to that journal.”*

This guide will help you prepare your research articles with the aim of having them published in interdisciplinary journals. It contains advice and tasks that will help you understand the needs of a multi-disciplinary audience and the best ways in which to present your writing. The tasks invite you to study examples and they cover matters both of organisation and of language use.

Although the focus of this booklet is on interdisciplinary journals, it covers fundamental principles about writing for academic journals and will therefore also be useful to those researchers who are aiming to publish within their own field.

This guide is based on findings from the ESRC-funded research project, ‘Investigating Interdisciplinary Research Discourse’, carried out at the University of Birmingham in cooperation with Elsevier. Interspersed throughout the text you will find paraphrases (in blue) of comments made by researchers and by editors during interviews carried out as part of this project. The journal article excerpts are taken from the following interdisciplinary journals: *Global Environmental Change*, *Journal of Rural Studies* and *Strategic Information Systems*.

## 2. Writing for interdisciplinary journals

Submitting an article to a discipline-specific journal can be a good way to build a reputation for research in your field. However, writing for an interdisciplinary journal has many benefits too. For example, by publishing in interdisciplinary journals, you can bring your research to the attention of a wider range of people.

We here define an interdisciplinary journal by its intended readership: it is a journal that publishes papers that originate in a range of disciplines and which have been written for an audience from a broad range of disciplines. These papers often address a set of real world problems around a central topic and offer a fresh perspective, e.g. on conceptual, theoretical or methodological issues.

Interdisciplinary journals tend to accept papers which fit their general theme. If a paper originates in a discipline that has not been represented in the journal before, the article is still likely to be accepted if it offers something novel to the theme and is of a high standard.

*“I try to avoid disciplinary journals because they serve the needs of a particular discipline and a lot of my research is of broader interest.”*

The best way to prepare your paper for submission to a journal is to do your research into what the journal wants: visit the journal website and carefully read the journal guidelines for authors; look at a sample of papers from that journal to see how the writers organise their papers, which sources they cite, what language they use, and so on.

## 3. Preparing to write for your multi-disciplinary audience

All researchers, including those that work in an environment with colleagues from the same disciplinary culture, have educational and academic backgrounds that are specific to them. When working in cooperation with others, researchers will be looking at matters from their particular perspective, which reflects the topics and theories they have been influenced by and are familiar with.

*“When I read an interdisciplinary journal article, I can tell which field the authors are from, because they write from the perspective of their field.”*

When writing for an audience from many different cultural and academic backgrounds, the challenge is to be aware that the readers may look at the world in very different ways. While it is not possible to know what all the other perspectives may be, authors can compensate for this by being explicit about their own world view throughout their article.

*“If we’re publishing a detailed, quite technical article, we tend to assume that our audience is not particularly knowledgeable about our topic and we would tend to repeat a lot of basic information about what has gone on in this area.”*

In this section, we will look at five areas that you need to consider when you are preparing your paper for submission to an interdisciplinary journal:

- The research contribution
- Writing your introduction
- Writing about writing
- Vocabulary
- Writing about yourself and others

### **3.1. The research contribution**

One of the key elements in any type of research paper is a statement regarding the contribution that the research makes.

*“When I want to publish in an interdisciplinary journal, my goal is to educate about the novelty of my research and about the value that is added when we are looking at a topic they are interested in but from a different perspective.”*

In your own field, you will need to demonstrate a methodological, theoretical or empirical contribution to the field or discipline. You are likely to emphasise the innovation in the theory or method and will aim to demonstrate your expertise.

When presenting interdisciplinary research this will still be true but your focus is likely to be on the **relevance** of the proposed study to ‘real-world’ concerns, and on its **applicability**.

**Task 1:** Read the two abstracts below. Identify phrases in the text that refer to (1) the real-world concerns that the research addresses and (2) the applications.

1. Concerns about water scarcity and management have focused attention on the relationship between agriculture and other competing water uses. This research aims to evaluate the perceptions of and preferences for irrigation use and management in a rural area, and it does so through an analysis of stakeholder attitudes in a large irrigation system in Southern France: the Neste System. The stakeholder analysis approach and the governance model approach are applied in combination with a new form of graphical representation to evaluate the conflicting points of view between stakeholder's profiles, which are called TIMA. Results revealed that there are heterogeneities between the preferences of stakeholder groups regarding water resources management, agricultural practices, and irrigation challenges. Qualitative and graphical results highlight the competing topics, the stakeholder relationships and the ability to secure permanent agreements by promoting participatory development and good governance. These results can be used by the relevant authorities to customize their interventions, knowing beforehand and in a well-structured form which are the different stakeholders' priorities. In this way, more effective avenues of communication can be established in the decision-making processes regarding irrigation challenges.
2. Climate change raises many questions with strong moral and ethical dimensions that are important to address in climate-policy formation and international negotiations. Particularly in the United States, the public discussion of these dimensions is strongly influenced by religious groups and leaders. Over the past few years, many religious groups have taken positions on climate change, highlighting its ethical dimensions. This paper aims to explore these ethical dimensions in the US public debate in relation to public support for climate policies. It analyzes in particular the Christian voices in the US public debate on climate change by typifying the various discourses. Three narratives emerge from this analysis: 'conservational stewardship' (conserving the 'garden of God' as it was created), 'developmental stewardship' (turning the wilderness into a garden as it should become) and 'developmental preservation' (God's creation is good and changing; progress and preservation should be combined). The different narratives address fundamental ethical questions, dealing with stewardship and social justice, and they provide proxies for public perception of climate change in the US. Policy strategies that pay careful attention to the effects of climate change and climate policy on the poor – in developing nations and the US itself – may find support among the US population. Religious framings of climate change resonate with the electorates of both progressive and conservative politicians and could serve as bridging devices for bipartisan climate-policy initiatives.

Notice how the authors of these abstracts emphasise the relevance of the work to issues in the ‘real’ world and its application at the beginning and end of the abstract.

*These results can be used by the relevant authorities to customise their interventions, knowing beforehand and in a well-structured form which are the different stakeholders' priorities. In this way, more effective avenues of communication can be established in the decision-making processes regarding irrigation challenges.*

*Policy strategies that pay careful attention to the effects of climate change and climate policy on the poor – in developing nations and the US itself – may find support among the US population. Religious framings of climate change resonate with the electorates of both progressive and conservative politicians and could serve as bridging devices for bipartisan climate-policy initiatives.*

In interdisciplinary journals, the writers will often emphasise that they are trying to solve a similar problem to others, i.e. to show that there is a common ground between them and other researchers.

At the same time, they have to specify what makes them different, which is likely to be their approach.

### 3.2. Writing your introduction

An introduction in a paper destined for an interdisciplinary journal is likely to be longer than the average introduction in a disciplinary journal because more background needs to be given to an audience that may be new to the specific topic or approach.

**“Our interdisciplinary journal is open to publishing different types of analyses but a paper that includes quantitative analyses has to be written in such a way that it would be accessible to non-specialists, which is what our readers are. Sometimes these papers use a different language, a different set of concepts and terminology and these will need explaining.”**

In the introduction it is important to **situate the research**, i.e. show how it relates to other research in the field. In a disciplinary journal it can be a good strategy to cite the same literature as the papers already published by the journal. This is also true for an interdisciplinary journal but it is important to draw on a broader range of literature.

**Task 2:** Read the two excerpts below. Identify the sections that situate the research.

1. *The purpose of this paper is to explore how firms respond to challenges from rare transformational technology that threatens a traditional, successful business model. We propose an extension of Christensen's theory of disruptive technologies and illustrate the extensions with a longitudinal case study of Kodak. ... The two main contributions of the paper are the extension to Christensen's theory and the lessons from Kodak's unsuccessful response to a major technological discontinuity.*
2. *Even while much research and practitioner discourse have focused on the process of strategic IS planning (Premkumar and King, 1994 and Ward and Peppard, 2002) and strategic IS alignment (Chan et al., 1997, Chan and Reich, 2007 and Henderson and Venkatraman, 1999), less research has delved into the actual content of IS strategy per se. The foundational work on IS strategy, led most notably by Earl (1989) and Galliers (1991), defined IS strategy as comprised of an information strategy, an information technology strategy, an information management strategy, and a change management strategy. Collectively, these components represent the fundamental decision areas entailed in managing IS. ...*

*Recognizing that IS strategy remains a term that is widely utilized but still not fully understood nor readily measured, Chen et al. (2010) develop and operationalize a typology of three IS strategies.*

*... , our study contributes to the literature on IS strategy by identifying an extension to the existing typology, that is, by finding a fourth possible IS strategy,...*

Notice how the writers both mention what research has been done and what has not:

**1.**

- *what has been done: Christensen's theory of disruptive technologies*
- *what the researchers propose: an extension of that theory, identification of lessons based on a case study of Kodak*

## 2.

- *what has been done: a focus on the process of strategic IS planning and alignment/ a typology of three strategies*
- *what has been done less: an exploration of the actual IS content*
- *what the researchers propose: an extension to the typology of strategies by adding a fourth*

In an interdisciplinary journal there will be a need to show that there is a common problem that is being addressed, and that there is a need for cooperation. At the same time the article writers need to move away from the common ground and show what is different in their approach.

Introductions tend to start with more general information and then narrow down the topic, ending with the unique approach that the research offers. In the following example, the first sentence of each paragraph of the introduction has been given. Notice how the information moves from general to specific:

**- The emergence of new retail channels** such as the Internet and mobile commerce create requirements for new payment instruments to enable feasible and convenient transactions in these channels (Ondrus and Pigneur, 2006).

...Mobile payments have been suggested as a solution to facilitate micropayments in electronic and mobile commerce, and to provide an alternative for the diminishing use of cash at point of sale (POS) (Menke and de Lussanet, 2006 and Ondrus and Pigneur, 2006).

**At present, there are many examples of successful mobile payment applications** such as the mobile content market which has developed into a billion dollar business, (Menke and de Lussanet, 2006), PayPal Mobile (Wolfe, 2007) or use of mobile payments in public transportation (Mallat et al., 2004).

...**The success or failure of mobile payments has strategic implications for many companies...**

**A recent survey suggests** that companies in the mobile payment business perceive consumer acceptance as the greatest barrier to mobile payment adoption (Edgar Dunn and Company, 2007). ...

**The objective of this study** is to explore consumer adoption of mobile payments by empirically detecting the adoption determinants that are relevant for the new mobile payment context.

## Task 3

Recreate the order of the following sentences, all taken from the start of paragraphs in an article introduction:

- a) *The contributions of this study are twofold.*
- b) *The rest of the paper is organized as follows:*
- c) *The last fifteen years have witnessed significant growth in the outsourcing industry (Oshri et al., 2015).*
- d) *Indeed, several recent studies have examined the practices through which innovation can be achieved in outsourcing settings.*

### 3.3. Writing about writing

In this section, we will look at two areas:

1. *Explaining how the text is organised*
2. *Explaining concepts*

#### 1. Explaining how the text is organised

Above you will have read the following text: “In this section, we will look at two areas”. This text refers to the organisation of the text ('this section') and functions as a signpost for the readers: it tells them what they can expect (“two areas”).

When you are writing for an audience that may not be familiar with the types of articles that are written in your specific discipline, it becomes very important to help these readers by signposting clearly for them.

“*When we receive submissions from people for whom English is a foreign language, we don't expect or require perfect writing skills, but we focus more on the organisation and presentation of the paper.*”

## Task 4

Read the two excerpts below. Highlight the language that is used to refer to the organisation of the text itself and/or that tells the reader what to expect.

*This paper is concerned with the effects of rent restructuring on the rents of social housing in rural areas in England. As we discuss below, one of the primary aims of rent restructuring policy is to reduce unjustifiable differences between the rents of similar dwellings in the local authority and housing association ('Registered Social Landlord'—RSL) sectors locally. ... The paper attempts to explore these and related issues by examining the effects that restructuring has on rural rents and by considering, in the light of these effects, some of the likely impacts of restructuring on affordability and investment.*

*The paper proceeds as follows: we first briefly survey some of the recent work on social housing provision in rural areas that is pertinent to the concerns of this paper, before, in Section 3, giving an overview of rent setting in the social rented sector and the issues and debate to which this has given rise...*

In some disciplinary journals certain patterns of organising the paper may be typical (such as 'Introduction – Methods – Results – Discussion'), but in an interdisciplinary journal there is likely to be more diversity. Signposting is therefore of vital importance in interdisciplinary journals, so that the reader can see how the paper is organised and what the status of a piece of information is – is it an **example**, is it a **reason**, is it a **factor**, etc?

Another reason why good signposting is needed is that interdisciplinary journals, especially in the Social Sciences, may have longer articles that therefore need to be clearly organised. The editors of some interdisciplinary journals are aware that writers may need to explain certain concepts to their multi-disciplinary audience and therefore offer more space.

*"Sometimes in interdisciplinary papers it has been a case of going back a step and explaining a certain idea a little more than we would if we were writing for a journal in our own discipline."*

## 2. Explaining concepts

Although writers always need to explain what they mean, this is even more important when writing for a multi-disciplinary audience.

*“When I write for a more general audience, I try to use English, not jargon.”*

Articles in interdisciplinary journals contain more ‘code glosses’ (Vande Kopple, 1985) e.g. words or phrases that point the reader to the meaning of elements in text. It is a good idea to ask yourself how you can guide the reader in your writing e.g. where you need to explain, rephrase, elaborate or exemplify, as in the following example.

*By ‘adaptation’ economists mean actions undertaken once environmental change has occurred to minimize the negative effects, or take advantage of the beneficial effects. For example, in response to a warmer climate, farmers might switch the crops they grow and the timing of crop planting and harvest.*

Some of the phrases that would be useful when you explain something to your reader are: *which means, that is to say, such as, for instance.*

*“My audience often consists of people whose first language is not English so it is important to use clear language.”*

## Task 5

Read the excerpts from the same article below. Identify the language that is used to introduce an example or an elaboration of an idea.

1. Other disciplines outside economics often assign a broader definition to the term that may include elements of what we have termed ‘adaptation’ above. For example, one legal definition includes the following additional meanings: ...
2. Public sector involvement is economically justified when the benefits of adaptive activities have public goods characteristics. For example, research has public goods characteristics because it provides a common benefit to many individuals.
3. The undertaking of large-scale public works projects, such as the construction of sea-walls and dikes also may provide collective benefits.
4. Consequently, those who do nothing can get a ‘free-ride’ on the costly actions others might take to mitigate the problem. As with other actual or potential environmental problems involving the use of shared resources, this means that public policies may be justified to correct the problem.
5. By this criterion, any course of action is judged acceptable if it confers a net advantage: that is, if benefits outweigh costs.

### 3.4. Vocabulary

*“Part of the job of crafting your research paper for publication is honing your language and defining the terms well so that everyone knows what you are talking about.”*

The examples from the last article included some examples of definitions. Explaining terminology is crucial when writing for a multi-disciplinary audience. It is natural to assume that concepts you are familiar with will be interpreted in the ‘normal’ way, but the same words can have a different meaning in another context. When you know about the existence of different interpretations of concepts in other fields, you can refer to these in your writing, as in the following example (from the same article as the examples above):

*By ‘adaptation’ economists mean actions undertaken once environmental change has occurred to minimize the negative effects, or take advantage of the beneficial effects. ... ‘Mitigation’ in the economic literature refers to actions that reduce or prevent undesirable environmental effects of production and consumption. Other disciplines outside economics often assign a broader definition to the term that may include elements of what we have termed ‘adaptation’ above. For example, one legal definition includes the following [three] additional meanings: ....*

*“Some concepts have a different meaning in another language, so I avoid those terms in international journals.”*

As you will not always know which concepts need to be explained, it is best to err on the side of caution and explain your key terms.

*“The word ‘cohort’ means a specific study group when you talk to environmental epidemiologists, but it means something different to ecologists. When we worked together, it took some time to realise we were talking about different things. You have to clarify your terms.”*

## Task 6

Identify (1) the concepts that are being defined in these excerpts and (2) their definitions.

1. Discussion on social aspects of ongoing relationships is captured within the framework of social capital proposed in the network literature. In this line of literature, social capital is conceptualized as a set of relational resources embedded in relationships that positively influence firm conduct and performance (Gulati et al., 2000 and Nahapiet and Ghoshal, 1998).
2. Given the coarse scale of current global integrated scenarios (and probably of those in the future), downscaling provides one possible tool for generating information at finer resolutions. The term “downscaling” is used here for any process in which coarse-scale data is disaggregated to a finer scale while ensuring consistency with the original data set.

It is a good idea to be clear about the extent to which your concepts are applicable. Notice how in both examples the definitions are given a specific context:

- ‘**in this line of literature**, social capital is ...’,
- ‘The term ... is used **here** for ...’

*“I worked in a team with people from Geography, Criminal Justice and Psychology to submit a proposal and we had to meet four times before we used the same terms to refer to concepts and had an understanding of what the issues were.”*

### **3.5. Writing about yourself and others**

This section is about the use of pronouns such as ‘I’ and ‘we’.

In general, the convention of journals is for authors to write in an impersonal way, rather than referring to people. Some editors will make changes to the language if this is the case. The reason for preferring an impersonal style is because it is seen to focus attention on the phenomena under investigation rather than on the researchers. The style in Physical Science journals tends to be more impersonal than in Social Science journals.

*“In the interdisciplinary journal I edit we have no objections to papers using personal pronouns, but the writing can’t be too colloquial.”*

The use of passive forms is related to the use of pronouns, as the passive allows the writer to leave out pronouns. For example: ‘a survey of town centre visitors was undertaken on two occasions’ [passive] is more impersonal than ‘we surveyed town centre visitors on two occasions’ [active].

Some editors like the passive; others prefer the active because it is more explicit: it states clearly who did what.

Some journals prefer a more personal style and do not discourage the use of ‘I’ or ‘we’. The reason for this is that it can make the article more interesting or easier to read. The use of pronouns such as ‘we’ also appears to have become more acceptable over time.

*“Our journal does not set stylistic guidelines and we welcome transdisciplinary work. We have a global trans-cultural perspective although our language is English.”*

Unfortunately, journals are unlikely to state explicitly what their point of view about pronouns is. It is therefore best to study the journal you are interested in publishing in to see what authors do in the majority of articles. You should also consider whether or not the use of a personal style is important for the messages that you want to convey.

### Task 7

Who does 'I', 'we' or 'our' mainly refer to in the following excerpts from interdisciplinary journals? Match the excerpts 1-4 with the options A-D. Note that some of these functions overlap.

- A. writers who have personally carried out the research
  - B. writers who are perhaps being critical of others (who have different methods)
  - C. writers who are being explicit to help the reader understand the meaning of the research
  - D. writers who are discussing the organisation of their text
1. *After balancing limited research resources with the perceived need to collect information from a variety of groups, we decided to conduct a total of 10 interviews.*
  2. *Overall, our findings challenge the common belief that OUICs are valuable by enabling firms to collect large amount of user-generated ideas. We found that simply collecting ideas from OUICs is not valuable whereas another often overlooked aspect related to how firms deal with the ideas from OUICs matters for value creation.*
  3. *In sum, I have used this section to canvass a range of wider themes that have emerged in recent social thought.*
  4. *This is presented in a diagram form as I argue the need to consider the political and discursive contexts in which a 'community' occurs and then focus on a number of constituent elements. People (through their multiple identities and groupings) are seen as 'central' to the constructions of a 'community'.*

## Task 8

In the following excerpts, what pronouns and/or phrases do the researchers use to refer to themselves?

1. In order to explore the extent of mutual dependence between market town services and hinterland residents, a questionnaire survey of town centre visitors was undertaken in February and June 2001 and 2002, with 432 usable questionnaires being completed. Respondents were interviewed face-to-face within the town centre, with selection based on the 'next-to-pass'. The interviewers visited the towns on a normal weekday, a market day during the week and on Saturday.
2. The timing of the data collection was suitable for the adoption study because mobile payments were available in the market but were still a relatively new innovation. We were therefore able to study mobile payments at a time when their adoption decision was still recent for the interviewees and to avoid the recall problem of adoption studies (Rogers, 1995).

Four researchers conducted the interviews in pairs where one moderated the discussion and the other managed a recorder and the facilities.

## 4. Conclusions

In disciplinary journals, writers tend to follow a conventionalised structure. They may adhere to a discipline-specific style and cite the same literature as the papers already published by the journal. A paper in such a journal needs to demonstrate that it makes a methodological, theoretical or empirical contribution to the field or discipline, and authors are likely to emphasise the innovation in the theory or the method, and demonstrate expertise.

*"As an editor of an interdisciplinary journal, I do not like papers that present the methods in a dry way, without motivating me in terms of its usefulness and broad audience, so I ask the authors to add to it, e.g. the usefulness to society or to other researchers, i.e. for a broader readership.*

*"They may need to add explanations and also to market or sell their ideas, i.e. make them more appealing."*

Papers in interdisciplinary journals tend to be longer and their length and style can be more flexible. In interdisciplinary journals there is less of a need to conform and authors have more freedom of expression. It is important for the authors to draw on a broad range of literature and to demonstrate the applicability of the research beyond their own discipline.

When writing for a broader audience, you are likely to need to include substantially more explanatory material and the focus will be on emphasising the relevance of the proposed method and on demonstrating applicability rather than expertise. In your paper you are likely to demonstrate how you address questions that are similar to those of other researchers but also how you adopt a different stance toward these questions.

It is important to clarify your terms and make sure that the terminology you use can be understood by a non-specialist audience. The language should be accessible to a broad audience and technical terms and key concepts need to be explained.

The tasks in this guide have provided you with excerpts from articles in interdisciplinary journals and have asked you to study them and notice how the writers have achieved their aims. When you prepare to write for one of these types of journals, visit the journal website, read the ‘guidelines for authors’ document carefully, and find some recent articles in the particular journal that are of interest to you, in order to learn what is required in areas such as the use of pronouns, the structure and purpose of introductions and so on (*see the Checklist overleaf*).

*“What I do, if it’s a journal I haven’t published in before, I look back to the journal to see what they have published that might be related to what I’m thinking of writing, to check what I’m writing is something that is not repeating what they have done but connects to it in some way.”*

Use the information that you deduce about the journal requirements and style to prepare your own article.

Finally, once you have a draft ready, it is important to identify a reader outside your usual discipline. Someone who is from a different disciplinary background will be able to let you know if you have given sufficient explanations, have been explicit enough and have defined the relevant concepts.

### **Checklist:**

#### *Before writing your draft:*

Research the journal that you plan to submit your paper to and notice how the following are handled in the majority of the papers:

- The length of the articles
- How the introduction is organised and what areas it addresses
- The way the writers situate the research: what they say is similar to the work of other writers and how they set themselves apart e.g. in terms of methodology
- The way the authors ‘write about writing’ in order to signpost and provide explanations to the readers
- The way in which terminology is explained
- The ways that authors organise their papers, particularly authors who are doing similar research to yours
- The use or avoidance of I/we

#### *After writing your draft:*

- Ask a colleague who does not work in your discipline to read the article and to let you know if it can be understood clearly or if you need to add more explanatory information.

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## Key to tasks

### Task 1:

1. (1) Concerns about water scarcity and management have focused attention on the relationship between agriculture and other competing water uses.

(2) These results can be used by the relevant authorities to customize their interventions, knowing beforehand and in a well-structured form which are the different stakeholders' priorities. In this way, more effective avenues of communication can be established in the decision-making processes regarding irrigation challenges.

2. (1) Climate change raises many questions with strong moral and ethical dimensions that are important to address in climate-policy formation and international negotiations. Particularly in the United States, the public discussion of these dimensions is strongly influenced by religious groups and leaders. Over the past few years, many religious groups have taken positions on climate change, highlighting its ethical dimensions.

(2) Policy strategies that pay careful attention to the effects of climate change and climate policy on the poor – in developing nations and the US itself – may find support among the US population. Religious framings of climate change resonate with the electorates of both progressive and conservative politicians and could serve as bridging devices for bipartisan climate-policy initiatives.

### Task 2:

1. We propose an extension of Christensen's theory of disruptive technologies ... The two main contributions of the paper are the extension to Christensen's theory and the lessons from Kodak's unsuccessful response to a major technological discontinuity.

2. less research has delved into the actual content of IS strategy per se. ... , our study contributes to the literature on IS strategy by identifying an extension to the existing typology, that is, by finding a fourth possible IS strategy,...

### Task 3:

1c, 2d, 3a, 4b

### Task 4:

- As we discuss below, ...
- The paper...
- The paper proceeds as follows: we first briefly survey ...
- ...before, in Section 3, ...

### Task 5:

1. For example
2. For example
3. Such as
4. This means
5. That is

### Task 6:

1. (1) social capital (2) a set of relational resources embedded in relationships that positively influence firm conduct and performance

2. (1) downscaling (2) any process in which coarse-scale data is disaggregated to a finer scale while ensuring consistency with the original data set.

### Task 7:

1a, 2b, 3d, 4c

### Task 8:

1. The interviewers ...
2. We ... Four researchers/ in pairs where one ... and the other ...



# How to get published

What distinguishes a good manuscript from a bad one?

Researcher Academy

## A good manuscript...

### ...is in scope

Investigate all candidate journals and find out about the:

- Aims and scope
- Accepted types of articles
- Readership
- Current hot topics by going through the abstracts of recent publications

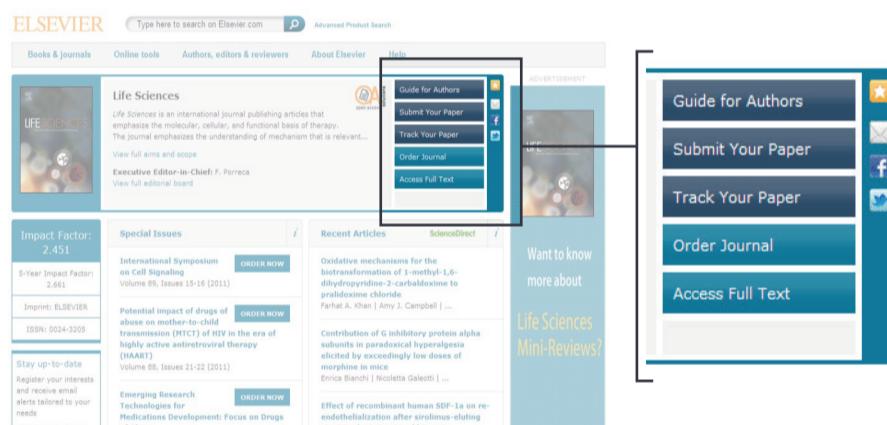
### ...adheres to publication ethics

- Avoid plagiarism of others' work
- Avoid multiple publication of the same work, never submit your manuscript to more than one journal at a time
- Cite and acknowledge others' work appropriately
- Only list co-authors who made major contributions

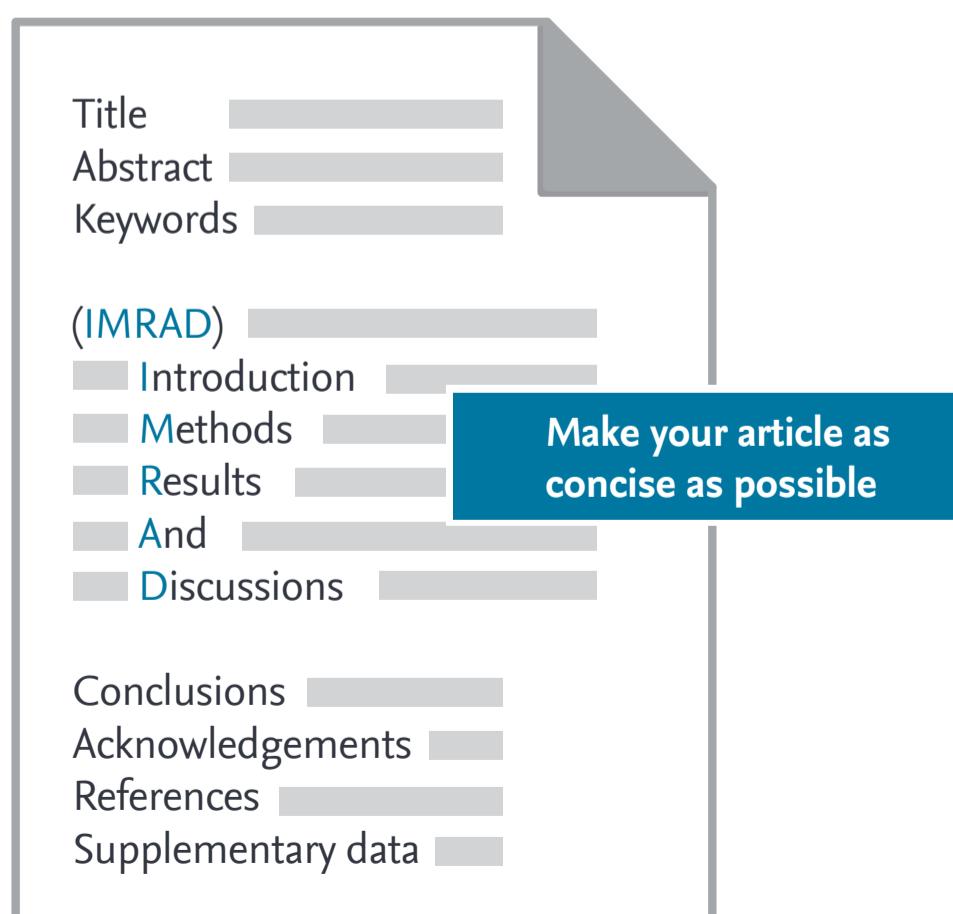
### ...follows the Guide for Authors

Stick to the [Guide for Authors](#) in your manuscript, editors do not like wasting time on poorly prepared manuscripts.

You can find the Guide for Authors on the journal's homepage on [elsevier.com](#).



## Article structure



## Illustrations

Illustrations are critical, because...

- **Figures and tables** are the most efficient way to present results
- **Results are the driving force of the publication**

**“ One picture is worth a thousand words. ”**  
Sue Hanauer (1968)

- **Captions and legends** must be detailed enough to make figures and tables self explanatory
- **No duplication of results** described in text or other illustrations

## Use proper manuscript language

Publishers do not correct language, this is the author's responsibility

- Ask a **native speaker** or use a **language editing service** to improve your paper before you submit it.
- Poor English makes it difficult for the editor and reviewers to understand your work and **might lead to rejection of your paper**.
- Be alert to common errors:
  - ✗ Sentence construction
  - ✗ Incorrect tenses
  - ✗ Inaccurate grammar
  - ✗ Mixing languages
- English language should be used throughout the manuscript, including figures, charts, graphs and photos.

## Are you ready to submit?

Roughly **35%** of all submitted manuscripts are **rejected before peer review**. Make sure you revise before you submit.

- Do your findings **advance understanding** in a specific research field?
- Is your work **of interest** to the journal's audience?
- Is your manuscript **structured** properly?
- Are your conclusions **justified** by your results?
- Are your **references** international/accessible enough?
- Did you format your **figures and tables** properly?
- Did you **correct** all grammatical and spelling mistakes?



## Make sure you are equipped!

