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**Word wrangling: the art of editing scientific publications**

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# Word wrangling: the art of editing scientific publications

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## ABSTRACT

The main method by which scientists communicate their findings to the world is through journal papers, but many scientists struggle with the task of self-editing, and some find writing itself to be a chore. Understanding the different stages of editing, and what takes place in each of those stages, can help to reduce the complexity of the editing task, assist an author to self-edit, and reduce costs of engaging an editor at a later stage. Further, use of a variety of self-editing tools and resources can reduce the time it takes to edit a document and increase the accuracy of the edit. These include the use of a dictionary, creation of a word list, use of a style guide, and creation of a style list. There are also tools that are available in Microsoft Word as macros, add-ons and software. Some of these tools and resources can be used by the authors but others, because of cost or technical complexity, are used at the corporate-support level or by editors. Online resources may be used to assist in engaging an editor, and understanding the standards expected of a professional editor, codes of practice and expected codes of professional behaviour. Whether the intent is to self-edit, have a colleague review the document, or to engage an editor, the ultimate goal is to improve the communication of the author's intended main points to the reader, and to ensure the paper itself is accurate, consistent and professional.

**Keywords:** Editing, writing, proofreading, knowledge transfer, communication

## 1. INTRODUCTION

Journal papers are the primary way that scientists communicate their work to the world. Although scientists may be specialists in their area of research, not all scientists enjoy writing.

Just as a successful research team has many different people, each of whom has a specific area of expertise or specialisation, successful communication of research findings can also take a team. From the authors, of which there may be one or many, to the organisation that may need to approve the paper, to communication specialists such as editors who help to finesse the paper until it faithfully reports the research in a way the intended audience can understand, working as a collaborative team can make the difference between an adequate paper and one that stands out as being professional and polished when reviewed for a journal.

Research scientists are experts in their area of research. But if the water pipe leading to the laboratory sink suddenly springs a leak, most would turn the water off at the mains and call in a plumber, because plumbers are experts in all things to do with burst water pipes. The same is true with science communication. Editors are experts in words, grammar, punctuation, and putting all of that together to assist in communicating using the written word. So, although a science editor may not be a permanent part of a research team, they can help to improve the readability, consistency and professionalism of the team's written communication.

Why is this important?

Most researchers remember reading a journal paper at some point and finding the methods can't be easily followed or understood. Perhaps they want to reproduce those experimental results, or understand the experimental design from another researcher's paper, so that it can be modified for their own use. But the methods section of the paper skips around and is hard to follow or is missing critical information.

What about reading a journal paper and noting the name of the fungus is misspelled at one point in the paper? Or finding that, although there is a citation after some interesting information, the reference is missing from the reference list?

What about a researcher's own paper, where after working on it day after day for weeks the researcher can almost recite it verbatim from memory? Because our brains concentrate mainly on the first and last letters of a word, and in fact will rearrange words that seem out of order, one might read a word as being spelled correctly even though it isn't, or a series of words that are jumbled as though they make sense. For example, you that read wrong. You that read wrong too. See how easy it is?

A fresh pair of eyes can help find the sorts of errors that might be missed because of an author's familiarity with the paper. Editors also provide an objective review of the writing. Authors are so familiar with their work, it sometimes takes an outsider to point out that more information is needed, or some points need to be clarified, so that someone from outside the author's laboratory can understand. This doesn't mean the writing in the paper is bad, it just means that the intended audience needs a bit more information or clarification on certain aspects of the work written about in the paper.

There are a number of things authors can do themselves to improve the readability of a paper, such as self-editing. Some of these things authors do intuitively because they have been subtly trained to do so in their path to becoming a scientist, such as understanding the usual outline of a journal paper as being abstract, introduction, methods, results and discussion, conclusions and references. There are also things that can be done in collaboration with others, such as working with an editor, to further refine a paper.

Whether or not an editor is used, there are a number of resources that can be called upon to assist with improving the readability, consistency and professionalism of a paper. Many of these resources are freely available online or can be sourced through a research organisation or library.

## **2. TYPES OF EDITING**

Whether the intention is to self-edit, or to engage an editor, there are different types, or stages, of editing: substantive editing, copyediting and proofreading.

### **2.1 Substantive editing**

Substantive editing, or structural editing, is the first step in editing a document. Substantive editing looks at the document as a whole and can involve reorganisation of text to improve language, logical flow and structure to ensure it is appropriate for the intended audience.

The overall structure of the document is checked. Headings may be added, changed or removed. Further information may be added, and extraneous information may be deleted. Further changes to the language to limit the use of jargon and technical terms, limit sentence complexity and check

the use of passive and active verbs may also occur. In some cases, information may be presented in a different form, such as a table, figure or bullet list. Supplementary material may be added, such as a figure or table, to bring further explanation to complex ideas.

When self-editing, ask the following questions:

*Does the document work as a whole, presenting a logical flow of information that, in the end, supports the thesis that is being presented?* Printing out the table of contents, including the lowest level of headings, can help with assessing whether the document has a strong logical structure or if the headings jump around outside of the logical flow of information. Check to see if there are there any steps missing in the argument or explanation presented. Check for whether there is too much detail around unimportant or noncritical aspects of the paper.

*Is the document written at a level appropriate for intended readers?* Check for jargon and technical terms that may need further defining or explanation, and ensure sentence length and complexity are appropriate for the audience. Question whether information would be better presented as a figure, or table, rather than as text, and whether the addition of a figure, or table may assist the audience in understanding detailed or complex ideas.

Once the language, logical flow and structure of the document has been checked, the next step in editing can occur: copyediting.

## **2.2 Copyediting**

Copyediting focuses on grammar, spelling, punctuation, style and internal consistency of the document. This is where errors in grammar, spelling, punctuation and usage are corrected. Accuracy may also be checked. Copyediting ensures correctness of the various elements of the document, and consistency of those elements throughout the document. It ensures content is accurate and complete, that any questionable material is dealt with appropriately, and that issues such as copyright and permissions are treated correctly.

When self-editing, ask the following questions:

*Is the grammar, spelling, punctuation and usage correct, or should someone who has a stronger background in English grammar be asked to check the writing?* Use of a dictionary, and spellcheck, will assist in catching spelling errors but may not find errors in usage (for instance, differentiating between easily confused words such as include/comprise, former/latter, explicit/implicit and e.g./i.e.). Check for common punctuation mistakes, such as:

- double periods (full stops) at the end of sentences
- incorrect use of apostrophes, such as
  - apostrophes in plurals (apostrophes are confusing, *not* apostrophe's are confusing)
  - missing apostrophes in possessives (the truck's brakes *not* the trucks brakes)
  - correct apostrophes in shortened decades ('90s, *not* '90's)
  - contractions (it's = it is; its = belonging to it)
- comma splices (Our experiment was conducted in the smaller laboratory; many of the other trials were also conducted there. *not* Our experiment was conducted in the smaller laboratory, many of the other trials were also conducted there.).

*Is the information accurate, such as the calculations, timelines, sources, quotations and URLs?* Review the information presented in the document and, where necessary, check to ensure quotations and sources are correct (nobody likes to be misquoted, or to have their name

misspelled), check calculations and conversions, check that numbers in tables and text agree, check that statistics are correct, and check that URLs are still live.

*Is the document consistent in terms of editorial style, layout, terminology, spelling, abbreviations, use of italics, treatment of numbers and referencing?* There is a never-ending list of things that should be checked for consistency. Editors use tools, such as macros, computer programs and add-ons, to help with these checks. Authors should consider creating a style sheet and a word list to record any style and spelling decisions that need to remain consistent throughout the document. Style sheets and word lists will be explained in greater detail in Section 3 (Self-editing tools) of this paper, but an example of a style sheet entry would be to define whether the document uses Canadian, British, American or Australian English spelling.

*Is there any questionable material in the document?* For example, check whether there is any material that may be considered defamatory. Ensure ground-breaking results or those that conflict with common knowledge have sufficient supporting information to withstand academic scrutiny.

*Is there anything missing from the document?* Check whether all references have an in-text citation, and whether all in-text citations have matching references. Check that all figures and tables have captions and in-text references. Check that all quotations are appropriately cited and, where necessary, any items that require copyright permission or acknowledgement have been given appropriate treatment.

Once the grammar, spelling, punctuation, style and internal consistency of the document has been checked, the final step in editing can occur: proofreading.

### **2.3 Proofreading**

Proofreading is the final stage of editing where the designed, or laid out, document is assessed for errors prior to publication. Most error checks and text modifications should have already taken place during the first two stages of editing: substantive editing and copyediting. Therefore, proofreading should pick up on any errors that occurred after the copyediting stage, when the document was being laid out into its final format (such as being taken from a Microsoft Word document to a PDF document).

Adherence to the style sheet and word list should be checked during proofreading. Additional checks for layout issues should also be done, such as checking for bad line breaks and page breaks, rivers, widows and orphans (explained below). Proofreading should also ensure no errors were introduced during the transformation from one platform to another, such as text being deleted, or added twice, and elements such as symbols and text haven't changed shape and are of the correct font. Page numberings are checked to ensure they are sequential and correct, and cross-checked against the table of contents and index.

Of importance when proofreading is to attempt to minimise any changes that would result in changes to page layout or in repagination. It is now too late to consider structural changes to the document, and major copyediting tasks should be avoided unless they affect the integrity of the document.

When self-editing, ask the following questions:

*Are there any obvious errors that require correction, such as spelling, grammar and punctuation?* Check against a dictionary, and word list if one has been prepared. Check subject–verb agreement and other grammatical errors that can be easily corrected.

When checked against the last copyedited version of the document, is any text or are any elements missing, or has any text been placed twice? Check that all tables and figures are there, as well as the captions and any other elements that may have been accidentally left out.

Are there any typographic, formatting or layout issues or errors? Check that the fonts are correct (type, size and colour). Check that the end-of-line breaks are appropriate and that page breaks are at logical places. For example, a page break in the middle of a sentence should be avoided. Check that all headings, subheadings and captions are of the appropriate heading level and therefore the correct font and style. Check that any italicised or bold words are still italicised or bold, and that any symbols in the text still appear as the correct symbol. Check also for layout issues such as rivers (white gaps that can occur in columns of text) (Figure 1), widows (when the last line of a paragraph sits by itself on a new page or column) (Figure 2) and orphans (when all or part of the first line of a new paragraph sits by itself at the bottom of a page or column) (Figure 3).

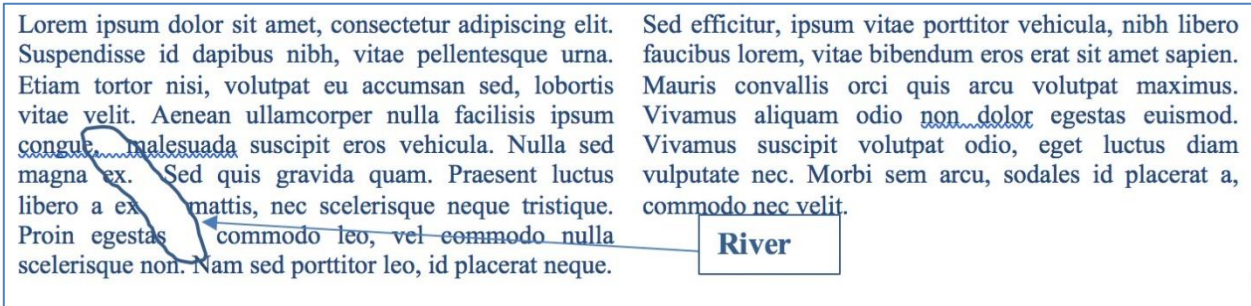


Figure 1: Example of a river in text layout. Note the ‘river’ of white space that appears in the block of text.

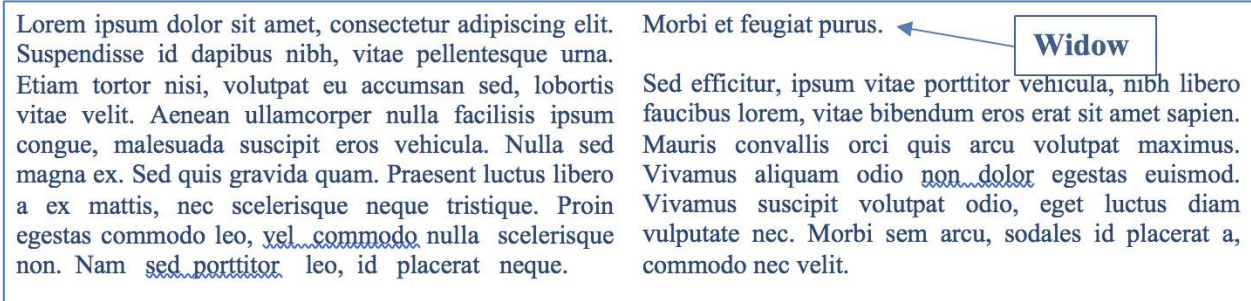


Figure 2: Example of a widow in text layout. Note that the widow consists of the last line of the paragraph from the column before.

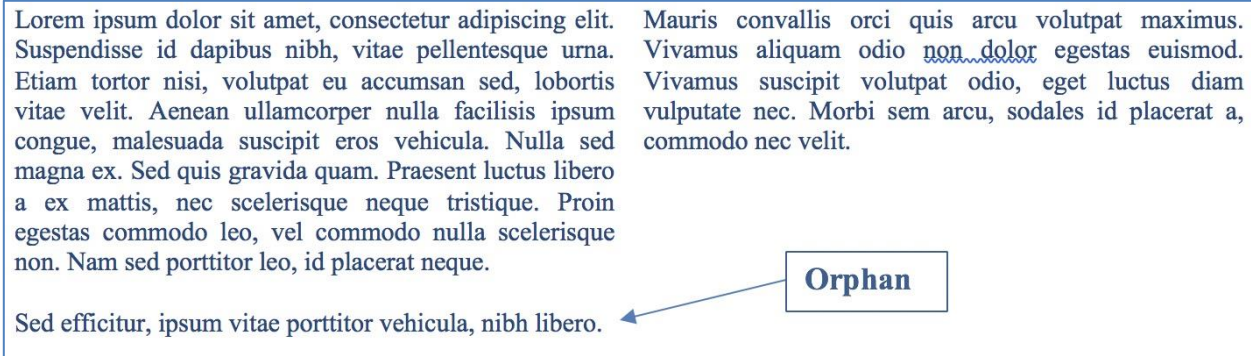


Figure 3: Example of an orphan in text layout. Note that the first line of the new paragraph sits by itself at the bottom of the previous column.

*Are there any consistency errors or issues with accuracy in the document?* Check that all of the cross-references are correct (does the Table 12 cross-referenced in the text actually refer to Table 12?). Check that all of the running heads (headers and footers) are correct. Check the page numberings to ensure they are sequential and correct, and cross-checked against the table of contents and index. Check whether all references have an in-text citation, and whether all in-text citations have matching references. Check that all figures and tables have captions and in-text references.

This section has explained the three different types, or stages, of editing: substantive editing, copyediting and proofreading. There are also a number of tools that can be used when self-editing. These tools are useful regardless of whether an editor will be engaged, and may help to reduce the costs of editing.

### **3. SELF-EDITING TOOLS**

One of the first questions editors receive from clients is ‘How can I reduce the cost of editing?’. The second question is usually, ‘Why didn’t I catch that mistake?’. Regardless of which type of editing is being done, editors will read through a document a number of times, each time concentrating on a specific set of corrections. Editors also use a number of tools to aid them. Some of these tools are specialised, such as macros, computer programs and add-ons. But some tools are very simple and can be used, or created, by the authors. These include the use of dictionaries, word lists, style guides and style lists. These tools assist immensely in ensuring consistency across the document.

#### **3.1 Dictionary and word list**

A necessary step, when self-editing, is to choose a dictionary and to use it. Remember that not all dictionaries are the same. Although all dictionaries are authoritative, they differ to some extent, with some adding new words and meanings as language changes much more quickly than others. Some are prescriptive, focusing on what is seen historically as correct use of language, and others are descriptive, describing actual usage. In fact, the authority of dictionaries has even been tested in court, where in New South Wales (Australia) in 2010 the outcome of a lottery ticket was based on the ordinary and natural meaning, in Australian English, of the word ‘bathe’ and whether ‘bathe’ also meant ‘swim’.<sup>1</sup>

Many dictionaries are now available online and, if a subscription is required to access it, this can often be done through an author’s research institution. Access to online dictionaries can also be done through library services, since many libraries provide free online access to a range of dictionaries, journals, databases and ebooks. For example, the State Library of Victoria in Australia provides online access to the Oxford English, American, Australian and New Zealand dictionaries, as well as the *Macquarie Dictionary*.

Even after a dictionary has been decided upon, a word list should be created to be used alongside the dictionary. Editors create a word list to supplement the dictionary, and add words to the list that either appear in the dictionary with two spellings (modeling/modelling, usage/useage) or don’t appear in the dictionary at all, such as botanical names, or names of people. Hyphenated words, and shortened forms such as acronyms and initialisms, should also be added to the word list. It is important, if a word is to be italicised, such as a Latinised name of a species, that the word appears

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<sup>1</sup> *Kuzmanovski v New South Wales Lotteries Corporation* [2010] FCA 876.

<http://lawyerslawyer.net/2010/10/19/which-dictionary-is-the-authoritative-arbiter-of-the-meaning-of-words-in-australia/>

italicised in the word list. It is also important that any words added to the word list are checked to be absolutely correct, because the word list becomes the authority on the correct spelling of the word.

A short example of a word list is presented in Figure 4. Note that some hyphenated words have ‘adj.’ after them. That means that the word is hyphenated when used adjectively (as a compound adjective before a noun), but not when used after a noun.

Letter	Words
A	Abe, Jeff above-ground (adj.) as in above-ground tank <i>but</i> the tank is above ground <i>Acacia aneura</i> <i>Acacia dealbata</i> Agricultural Production System sIMulator (APSIM) agri-food agri-tourism agro-economic studies among (not amongst, unless in quotes or extracts) Australian Land and Cattle Company (ALCCO)
...	...
W	water-related development wattle wellbeing wet-season (adj.) as in wet-season rains <i>but</i> in the wet season while, not whilst whole-farm-scale dynamic simulation model wind-borne pests work-related (adj.) <i>but</i> non-work related
X	
Y	year-on-year
Z	

Figure 4: Abbreviated example of a word list.

It is also a good idea to include usage of words in the word list, such as the preference to use ‘among’ rather than ‘amongst’ in the above word list example.

If an editor is engaged, or the document is passed on to colleagues for review, the dictionary should be specified and the word list submitted so that they can be used during the editing or review process.

### 3.2 Style guides and style list

As mentioned previously, it is a good idea to follow a consistent style throughout a paper. One way of doing this is to take note of any style decisions that are made. Another is to follow an already published style guide. Many style guides are now available both as printed books and online, making them much easier to use because of the improved search functions available online.

*Scientific Style and Format: The Council of Science Editors Manual for Authors, Editors, and Publishers*, is one of the most widely recognised scientific style guides, providing style decisions for a broad range of scientific disciplines. This style guide focuses on style decisions that are required in scientific publications, such as units and symbols, taxonomy and nomenclature.

A scientific style guide can help to work out which terms should be italicised and which shouldn’t, as well as which terms should be capitalised. For example, one should italicise the Latinised name of a species, which consists of the genus name and the species:



*Eucalyptus globulus*

but the use of italics changes if a subspecies is added:

*Eucalyptus globulus* subsp. *bicostata*

or if the authors responsible for the scientific name are added:

*Eucalyptus globulus* subsp. *bicostata* (Maiden, Blakely & Simmonds) J.B. Kirkp.

or it is decided to just refer to a tree in the *Eucalyptus* genus without identifying it at the species level:

*Eucalyptus* sp.

*The Chicago Manual of Style* (CMOS) provides a guide to style, usage, grammar and punctuation. This style guide focuses on style decisions that relate to language and punctuation rather than scientific conventions. For example, if an author can't decide whether to use a hyphen in the compound term '9 week trial', CMOS provides a table of compounds by category and the author can easily look up that it should be '9-week trial'.

There are quite a few other style guides available online and in print, each of which is useful for a specific type of document or use. For example:

- The American Medical Association's *AMA Manual of Style* is used for medical as well as scientific publishing. This style guide includes style decisions related to medicine and medical research.
- In Australia, the *Style Manual*, which was published by the Australian Government, is the authoritative resource for Australian Government publications.
- In the US, the *US Government Publishing Office Style Manual* is the authoritative resource for US Government publications.
- The *Conscious Style Guide* is a set of online tools and guides that empower authors to think critically about the way language can affect a reader's interpretation of the written word, and to ensure responsible use of language, especially in the realms of age and disability; gender, sex and sexuality; ethnicity, race and nationality; and religion and spirituality.
- Companies such as Apple, Microsoft and Adobe publish their own style guides. These can be helpful if querying whether the trademark symbol needs to be used or to check the correct name of a product.
- Publishers usually provide their own style guides. For journal publishers, each journal will have its own style guide that should be followed.
- IRG also provides their own style guide for the preparation of IRG documents: IRG/WP 17-60428.

It is best to check for a style guide before writing commences, as sometimes the structure or format of the document is defined in the style guide.

Keep in mind it is perfectly fine to follow a style guide as well as keep a separate list of any style decisions that are special or need to be followed because they are required by a publisher. If an author decides to engage an editor, the editor should be advised as to which style guide the author is following, as well as being sent the separate list of style decisions.

### 3.3 Microsoft Word tools

Microsoft Word has a number of tools and functions included in the program that may be useful. The most commonly known functions are spell check and grammar check. Custom dictionaries can also be added to Microsoft Word, which is very useful if an author uses a lot of technical terms or scientific nomenclature, because it reduces the number of words with red squiggly lines beneath them (denoting a misspelled word).

Some lesser-known functions include the ability to show non-printing characters, such as spaces, paragraph marks and tab marks. Turning these on will make it easier to see if there are extra spaces, paragraph marks or tabs in the document.

### **3.4 Macros, add-ons and software**

Macros, add-ons and software can also be used with Microsoft Word in order to automate editorial functions. For example, a macro can find duplicated words in a document, and another can list all of the proper nouns in a document (to check whether names have been misspelled). Another macro can compare the in-text citations against references, and vice-versa, to ensure all references have a citation, and all citations have a reference. This macro alone can save hours of laborious checking of references.

Note that use of macros, add-ons and software for editing may be beyond the scope for most authors, after all their job is to write clear, accurate explanations of their research and the impact of that research on the scientific community. However, it is worth explaining some of the most common ones, in part so that authors can understand some of the tools that editors use, in part to develop an appreciation of the level of technical competence many editors must have to perform their jobs well, and in part to explore whether any of these might play a part within an organisation at the support level (such as in-house communications teams or editors). This is by no means a comprehensive list of all macros, add-ons and software that can be used, and is in no way meant to promote any one over another.

There is a wealth of information online, and on the Microsoft Office Support website, that explains how to create and run macros, so that will not be covered here. Having a fairly strong understanding of the technical aspects of Microsoft Word, and Visual Basic, are useful prerequisites to using macros. It is worth mentioning that one of the exemplars in using macros for editing Microsoft Word documents is Paul Beverley, who has a YouTube channel dedicated to explaining his macros as well as a website with a free book containing hundreds of macros for editors:

- <http://www.archivepub.co.uk/macros.html>
- <https://www.youtube.com/channel/UC6J6ZPMJQ0T5eMIcX3tKh2g/feed>.

The Editorium (<http://www.editorium.com/14842.htm>) sells an add-on for Microsoft Word called Editor's ToolKit Plus 2018 that performs a number of time-saving editorial functions as well. The functions include deleting extra spaces and returns, changing improperly typed ellipses to proper ones, and removing spaced around en dashes.

Another time-saving add-on for Microsoft Word is a program called PerfectIT from Intelligent Editing. PerfectIT is a consistency checker, and checks for consistent use of words and spellings throughout a document. Organisations can create their own style sheets for PerfectIT, and when their documents are edited they are run through PerfectIT as a final check to find any consistency issues missed in the line-by-line edit. By customising a style sheet for PerfectIT, organisations are able to include all of the items from their in-house style sheets and word lists in the checks, saving time and improving consistency not just within documents but between documents published by the organisations.

As demonstrated in this section, there is no shortage of tools that can be used by authors and editors. This section contained a short list of those available. Many of these can be used by authors to self-edit, and some require higher levels of technical expertise to use. Some require higher investments of time and money than the average author would consider, and are more useful at the corporate-support level or for professional editors. There are also other resources that may be

useful to authors, especially in assisting with finding an editor, and understanding what standards professional editors are expected to meet.

## **4. RESOURCES**

There are other resources that might be useful, whether for self-editing or engaging an editor. These are online directories to assist with finding an editor, editing standards and codes of practice or ethics, and online resources that can help with grammar, spelling and usage.

### **4.1 Editor directories**

There are a number of organisations throughout the world that represent editors. The Institute of Professional Editors (IPEd) in Australia, the Society for Editors and Proofreaders (SfEP) in the UK, and the Board of Editors in the Life Sciences (BELS) in the US are three such organisations. Their websites include directories of editors, which can be searched to find an editor that suits specific requirements. Most of the directories can be searched by country, area of expertise, services and, in some directories, by the editor's qualifications. The directories can be reached via the organisations' websites, for example:

- <http://iped-editors.org>
- <https://www.sfep.org.uk>
- <https://www.bels.org>.

Finding a freelance editor through an editor directory does not necessarily guarantee that a particular editor will be suitable for an author's requirements. It is always a good idea to check a potential freelance editor's website and testimonials, and to see if they have previously done work of a similar nature. After all, it is unlikely an editor who specialises in editing crime novels will be particularly adept at editing journal papers. It is also a good idea to see if they have formal qualifications in editing, as well as any accreditations or certifications they may have earned.

Formal editing qualifications may come from a range of sources: vocational awards, undergraduate degrees, postgraduate degrees, graduate diplomas, courses and workshops.

Preeminent certifications and qualifications may include the following:

- certification by BELS in the US, by examination, designated by the postnominal ELS
- accreditation by IPEd in Australia, by examination, designated by the postnominal AE
- Advanced Professional Membership of the SfEP in the UK, by application
- certification by Editors Canada, available in four individual skill sets (structural editing, stylistic editing, copy editing or proofreading) by examination and, if all four tests are passed, designated by the postnominal CPE.

Editors, historically, were apprenticed, and so learned on the job. There are many editors who gained their experience and skills through on-the-job training.

Although a good scientific editor does not necessarily need to have completed a PhD or higher education themselves, many have, which adds to their wealth of experience in editing journal papers and other scientific content.

### **4.2 Standards for editing and codes of practice or ethics**

Many organisations that represent editors worldwide have also set out standards for editing practice. These set out the core standard that professional editors should meet, and codes of

practice or ethics, which establish best practice and codes of professional behaviour for professional editors.

These standards and codes of practice can usually be found online, for example:

- for IPED: [http://iped-editors.org/About\\_editing/Editing\\_standards.aspx](http://iped-editors.org/About_editing/Editing_standards.aspx) and [http://iped-editors.org/About\\_IPEd/Code\\_of\\_ethics.aspx](http://iped-editors.org/About_IPEd/Code_of_ethics.aspx)
- for SfEP: <https://www.sfep.org.uk>
- for BELS: <https://www.bels.org/code-of-ethics2>
- for Editors Canada: <https://www.editors.ca/node/11696>.

If considering self-editing, visiting one or more of the sets of online editorial standards may be useful in creating a customised editing checklist.

### 4.3 Online resources

There is ever-increasing availability of online information that can help when self-editing. Always check the reliability of the information, and stick with reputable resources where available. Some favourites are:

- Grammar Girl's Quick and Dirty Tips (<https://www.quickanddirtytips.com/grammar-girl>)
- the Oxford Living Dictionaries grammar website, which provides a searchable database of articles on grammar, punctuation, spelling, word usage and classes and writing tips (<https://en.oxforddictionaries.com/grammar>)
- the Monash University Citing and Referencing website, which provides citation and referencing guides for most major citation styles (<https://guides.lib.monash.edu/citing-referencing>). Many universities now have their own websites of a similar nature
- websites that change long URLs to small ones, such as <https://tinyurl.com> and <https://bitly.com>
- the Copyeditors' Knowledge Base, curated by consulting medical editor Katharine O'Moore-Klopf, which has an immense list of online resources that are useful for editors and authors alike (<http://www.kokedit.com/ckb.php>).

## 5. CONCLUSIONS

Editing can be a time-consuming and onerous task. Understanding the different stages of editing, and what takes place in each of those stages, can help to lessen the complexity of the editing process, assist an author to self-edit, and reduce costs of engaging an editor at a later stage.

Substantive editing, or structural editing, ensures that the document is appropriate for the intended audience by checking language, logical flow and structure of the document. Substantive editing is the first stage of editing because it involves the most disruptive tasks of adding, deleting and restructuring text, figures and tables.

Copyediting is the next stage of editing, where errors in grammar, spelling, punctuation and usage are corrected and details and accuracy are checked. Consistency is one of the main issues dealt with in copyediting, as well as ensuring that any questionable material is managed appropriately, and that issues such as copyright and permissions are treated correctly.

The final stage of editing, proofreading, takes place on the final, or laid out, document. Aside from picking up any small errors that may have been missed in the copyedit, the main task of proofreading is to ensure no errors were introduced when transforming the document from one

platform to another, and that there are no issues with the layout that affect readability and presentation.

There are a variety of self-editing tools that may be used by an author, or an editor, to reduce the time it takes to edit a document and to increase the accuracy of the edit. These include the use of a dictionary, creation of a word list, use of a style guide, and creation of a style list. There are also tools that are available in Microsoft Word as macros, add-ons and software, which can provide additional gains in accuracy and speed up the editing task. Some of these can be used by authors and some, because of their cost or the level of proficiency required to operate them, are used at the corporate-support level or by editors.

There are resources, which can be found on the internet, that assist in locating freelance editors, and resources that explain the standards expected of a professional editor, codes of practice and expected codes of professional behaviour. The editorial standards may be useful in creating an individualised checklist of things to check when self-editing. There is also an immense amount of information available online on a range of subjects related to editing and writing. Stick with reputable resources where available.

Finally, remember that the main purpose of reviewing, self-editing, or engaging an editor, is to improve the communication of the author's intended main points to the reader.

## **6. REFERENCES**

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