Writing scientific articles in English for publication

Session 1

Dr Sean Murphy
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1 Use correct word order
2 Avoid long sentences
3 Structure paragraphs and sentences
4 Be concise and precise
Points mean prizes!

1 point
2 points
4 points
1 Use correct word order
Basic word order in English

The researcher sent her manuscript to the journal.

SUBJECT  VERB  DIRECT OBJECT  INDIRECT OBJECT

Last week, the researcher sent her manuscript to the journal for the second time.

ADVERB  PREPOSITIONAL PHRASE

6 points
Most relevant subject

A. Particularly interesting for researchers in public health is the new way, named X, for measuring levels of addiction.

B. X is a new way to calculate levels of addiction. It is particularly interesting for researchers in public health.

C. Public health now has a new way, named X, which is particularly interesting for researchers in public health, for measuring levels of addiction.
Subject

A. Projected prevalence rates after 10, 30, and 50 years following an intervention assumed as initiated in 1998 are shown in Table 2.

B. Table 2 shows projected prevalence rates after 10, 30, and 50 years following an intervention assumed as initiated in 1998.

<table>
<thead>
<tr>
<th>Relative Risk of Intervention</th>
<th>Mean Delay, y</th>
<th>Alzheimer's Disease Prevalence ( Millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>2007</td>
</tr>
<tr>
<td>1.00</td>
<td>0</td>
<td>2.89</td>
</tr>
<tr>
<td>0.95</td>
<td>0.5</td>
<td>2.79</td>
</tr>
<tr>
<td>0.90</td>
<td>1.0</td>
<td>2.68</td>
</tr>
<tr>
<td>0.75</td>
<td>2.0</td>
<td>2.32</td>
</tr>
<tr>
<td>0.50</td>
<td>5.0</td>
<td>1.74</td>
</tr>
</tbody>
</table>
it as subject?

A. The new version must be used.

B. It is mandatory to use the new version

A. It is possible to do this with the new system.

B. This can be done with the new system.
Although it is a major cause of blindness, a uniform definition of glaucoma is needed to assess its public health impact.

Although glaucoma is a major cause of blindness, a uniform definition of the disease is needed to assess its public health impact.
A. An important factor in improving the quality of clinical studies is clarity in defining these infections.

B. Clarity in defining these infections is an important factor in improving the quality of clinical studies.

A. Time and cost are considerations that influence the choice of instruments.

B. Considerations that influence the choice of instruments are issues relating to time and cost.
A. **People** of high intelligence, an ability to solve problems, a passion for computers, and good communication skills, **are** generally employed by companies.

B. **Companies** generally **employ** people of high intelligence, an ability to solve problems, a passion for computers, and good communication skills.
Subject verb

A. The result, after the calculation has been made, can be used to determine Y.

B. After the calculation has been made, the result can be used to determine Y.

A. This method, when it is possible, is useful because it allows...

B. When this method is possible, it is useful because it allows...
A. We can **associate a high cost** with these values.

B. We can **associate** with these values a **high cost**.

C. We can **associate several factors** with these values: a **high cost, more training, and significantly more work**.

D. The following can be associated with these values:
   - a high cost,
   - more training,
   - significantly more work.
direct object indirect object

A. This operation is recommended only for some cases.

B. Only for some cases this operation is recommended.

A. One can find instances of this disease in the above references.

B. In the above references one can find instances of this disease.

2 points
Adverbs: frequency

usually
These neurons do not exhibit biochemical changes.
always
Late complication may not have been recorded.
often
Patients are/were confused.

These neurons do not usually exhibit biochemical changes.
Late complication may not always have been recorded.
Patients are/were often confused.
Adverbs: certainty, manner, time

probably A trial will not give a simple answer.
probably A trial won’t give a simple answer. (spoken)
steadily Frequency rises with the number of transfusions.
considerably Levels of mortality vary among countries.
in the last few years Significant advances have been made

A trial will probably not give a simple answer.
A trial probably won’t give a simple answer. (spoken)
Frequency rises steadily with the number of transfusions.
Levels of mortality vary considerably among countries.
Significant advances have been made in the last few years.
Adverbs: consequence

Therefore, mutations give a higher chance of ...

Dysfunction may thus be a major component of ...

Hence, patients with a relatively high number of...
Adverbs: addition
Moreover, obesity and insulin resistance have been found to...
In addition, the improvements noted in our study were unrelated to gender ...
Furthermore, these results suggest that...
Adverbs: contrast

However, these authors are primarily interested not in...
Of greatest interest, however, was that levels in patients...
Nevertheless, results appear to support the concept that...
In contrast, the analysis of older patients revealed...
Capillaries are small, whereas/while cancer cells are quite large.
Adverbs: enumerate points

Firstly, malarial disease may be affected by other factors...

Secondly, hyperglycaemia may be involved...

Finally, higher levels predict subsequent development of ...
Adverbs: Attract attention, express emotion

Notably, this is the first study to investigate the effectiveness of..

Surprisingly, few of the patients were aware of their disorder...

Interestingly, virtually all men with the syndrome were..

Regrettably, many studies have failed to take account of...
Adverbs: specify

Specifically, patients treated with this therapy showed...

In particular, patients who discontinued treatment were...
Exercise A: Choose the best word order to help the reader

Answers

1) B Since 2012, these factors have been considered of primary importance.

2) A The following diagram describes the process of patient care:

3) B The findings highlighted a lack of this kind of motor function in patients with severe disabilities.

4) B Finally, the reliability of the system was confirmed by the results gained during the last competition, in which Karaganda State Medical University participated for the first time.
Exercise B: avoiding impersonal *it*

Answers

1. Carrying out these tests is easy. / These tests are easy to carry out.

2. Salaries may increase.

3. The samples must be cleaned.

4. All future operations will probably be required to follow the new safety procedures.
2 Avoiding long sentences

A proverb is a short sentence based on long experience.

Miguel de Cervantes
1547-1616
Points to bear in mind

• The reader wants to
  • read a sentence once
  • concentrate normally
  • understand the logic easily

• Sentence length
  • 15-20 words (maximum 25 words)
Why long sentences occur

- Too many connectors – and moreover, etc.
- Too many lists – components, reasons, etc.
- Too much punctuation - commas (,), semi-colons (;), etc.
Don’t overuse ‘and’

The treatments are very often expensive and technically difficult. Their effectiveness very much depends on the chemical and physical characteristics of the substances used for impregnation. Also important is their ability to ...
On the other hand – for contrast

The levels of cadmium in Site C were comparable to the levels found in Sites A and B in the previous years. On the other hand, the levels for copper were much lower in Site C with respect to the values found in the previous sampling campaigns in 2008 and 2010.
However

The levels of cadmium in Site C were comparable to the levels found in Sites A and B in the previous years. However, this was not the case for the levels found in the south-east part of Site C.
Don’t overuse ‘which’

English has now become the world’s international language and is studied by more than a billion people in various parts of the world. This has given rise to an industry of English language textbooks and teachers. Today, English is generally used in scientific papers.
Commas

Let's eat Grandma!
Let's eat, Grandma!

Punctuation saves lives
As a preliminary study, in an attempt to establish a relationship between document length and level of bureaucracy, we analyzed the length of 50 European Union documents, written in seven of the official languages of the EU, to confirm whether documents, such as reports regarding legislative and administrative issues, vary substantially in
In our preliminary study we analyzed translations from English into seven of the official languages of the European Union. We chose 50 documents, mostly regarding legislative and administrative issues. We
- Connect ideas
  It's a good idea; let's hope it works.

- List with long items
  You can use the gym if you respect other users; pay your subscription regularly; use...
Exercise C: writing short sentences

Write a few sentences about your professional interests.
3 Structuring paragraphs and sentences

= Keep It Simple
Think about the reader

• Your style needs to be:
  • relevant
  • concise
  • specific
The Topic sentence
States the main idea – a general statement

Explanation or Definition (optional)
Clarifies any difficult or unclear terms in the Topic sentence
Alternatively: introduces the evidence

Evidence
Supports or develops the main idea with facts, examples, experiments, studies, arguments, quotes etc.

Comment
- Explains what the evidence means, & how it relates to your point.
- Supports or develops the evidence with analysis or further info e.g. opposing or contrasting points to broaden or develop the discussion.
- If appropriate, mention other evidence (examples/studies/experiments/interpretations) to widen the discussion.

Concluding sentence
- States the implications or consequences of the paragraph
- Shows the development of the argument
- Links back to the Topic sentence (may use same or similar key words from the Topic sentence)
- Links forwards to the main idea of the next paragraph

[1] Topic sentence


How sentences work together

Writers have different methods of organising articles. Good writers appear to agree on a general approach to organisation. This consists of stating the problem, describing the method, presenting and discussing the results, and summarising the conclusions. This type of organisation seems obvious, logical and natural. However, it is not universally accepted. Some writers prefer to present results and conclusions near the beginning, and describe how they obtained these results in following sections.

Adapted from Katzoff, S. (1964) *Clarity in technical reporting.*
The Academic Phrasebank is a general resource for academic writers. It aims to provide you with examples of some of the phraseological ‘nuts and bolts’ of writing organised according to the main sections of a research paper or dissertation (see the top menu). Other phrases are listed under the more general communicative functions of academic writing (see the menu on the left). The resource should be particularly useful for writers who need to report their research work. The phrases, and the headings under which they are listed, can be used simply to assist you in thinking about the content and organisation of your own writing, or the phrases can be incorporated into your writing where this is appropriate. In most cases, a certain amount of creativity and adaptation will be necessary when a phrase is used. The items in the Academic Phrasebank are mostly content neutral and generic in nature; in using them, therefore, you are not stealing other people’s ideas and this does not constitute plagiarism. For some of the entries, specific content words have been included for illustrative purposes, and these should be substituted when the phrases are used. The resource was designed primarily for academic and scientific writers who are non-native speakers of English. However, native speaker writers may still find much of the material helpful. In fact, recent data suggest that the majority of users are native speakers of English. More about Academic Phrasebank.

This site was created by John Morley. If you could spare just two or three minutes of your time, I would be extremely grateful for any feedback on Academic Phrasebank: Please click here to access a very short questionnaire. Thank you.
Exercise D: connecting sentences

Answers

1. This discovery

2. Such rejections

3. Their performance

4. Such knowledge
4 Being concise and precise

"Genius is the ability to reduce the complicated to the simple."

E = mc^2

The Theory of Relativity
1905
Examples

achieve an improvement
carry out a test
give an explanation
implement a change
make a prediction
reach a conclusion
subject to examination

improve
test
explain
change
predict
conclude
examine
Avoid impersonal expressions

- *It is necessary* to use X. ☹
- X is necessary. ☻

- *It is advisable* to clean the recipients. ☹
- The recipients *should* be cleaned. ☻
Avoid impersonal expressions

• *It is surprising* that ... ☹
• *Surprisingly*, ... ☺

• *It is unfortunate* that ... ☹
• *Unfortunately*, ... ☺

• *It is clear / evident / probable* that inflation will rise. ☹
• Inflation will *clearly / evidently / probably* rise. ☺
End of Session 1
Writing scientific articles in English for publication

Session 2

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Session 2

Strategic writing skills

- Highlight your findings
- Using ‘hedging’ to protect yourself
- Paraphrase and avoid plagiarism
- Write an abstract
Highlighting your findings

...were not considered by the Chinese investigators to be related strongly to methadone dose.

Importantly, this study has demonstrated that the provision of OST is associated with a substantial reduction in the risk of HIV exposure associated with IDU. This finding accords with the findings of similar studies [1,6,7] and is particularly encouraging, given the observation that IDU risk-related behaviours remain reduced as long as clients are retained in treatment [24].

We believe this study confirms that OST is able to be...
Put key findings in short sentences

Key findings

Most people do not value the written medicines information they receive. The poor quality of many leaflets tested, in terms of content and layout, may reflect the finding that provision, more often than not, did not increase knowledge. **No evidence was found that the information affected patient satisfaction or compliance.** Qualitative evidence shows that patients do not see improving compliance as a function of PILs*; an informed decision not to take a medicine is an acceptable outcome. This contrasts with some professionals' view that increasing compliance was a prime PIL function.

*PIL = Patient Information Leaflets
List implications of key findings

Four key areas in the Facing Dementia Survey findings illuminated current barriers to care for persons with AD*: (i) timing of diagnosis; (ii) AD as a health care priority; (iii) the impact of AD on the lives of patients, caregivers and their families; and (iv) understanding of available information about AD and its treatment.

*AD = Alzheimer’s Disease
Consider using bullet points

Four key areas in the Facing Dementia Survey findings illuminated current barriers to care for persons with AD*:

- timing of diagnosis;
- AD as a health care priority;
- the impact of AD on the lives of patients, caregivers and their families; and
- understanding of available information about AD and its treatment.

*AD = Alzheimer’s Disease
Remarkably, persons with chronic pain can report high levels of satisfaction with pain. Unfortunately, patients have difficulty communicating to physicians the full nature of their difficulties. Not surprisingly, the way in which senior nurses perceived their administrative duties was related to... These findings are intriguing, as they suggest that... This conclusion was based primarily on convincing evidence of a causal association between...

[Link to SkELL]

https://skell.sketchengine.co.uk/run.cgi/skell
Make key findings accessible to a non-expert

The survey results showed broad agreement that fear makes people hesitate to consult doctors about AD. Although not directly addressed in this research, it is possible that such fear, combined with poor awareness of early symptoms and their ambiguous nature, creates a high level of uncertainty delaying any action until the disease process has advanced so far that no one can any longer deny there is something wrong.
Using ‘hedging’ to protect yourself

There is no absolute knowledge. [...] All information is imperfect. We have to treat it with humility.

Jacob Bronowski
Why hedge?

To anticipate criticism.

To show you are open-minded.
Without hedging 😞
Our results show / prove that dogs are more intelligent than cats.

With hedging ☺
Our results seem to indicate / suggest that...

A possible conclusion might be that...

The results of this study lead us to conclude that dogs may be...
Categorical

• This factor is responsible for...
• These results show...
• These findings prove that ...
• This means that ...

Hedged

• This factor may be responsible for...
• These results seem to show...
• These findings appear to prove ...
• It seems likely / probable / possible that...
Anticipating alternative interpretations

Other factors could be responsible for ...

The opposite may also be true.

Other possible interpretations may be that ...

It may be premature to conclude that ...
Hedging: an example

Categorical

The evidence shows positive associations between patient experience and patient safety and clinical effectiveness that are consistent across a range of disease areas, study designs, settings, population groups and outcome measures.

With hedging

Overall, the evidence indicates positive associations between patient experience and patient safety and clinical effectiveness that appear consistent across a range of disease areas, study designs, settings, population groups and outcome measures.
Paraphrase and avoid plagiarism

Paraphrase
Put someone’s ideas into your words.

Plagiarise
Copy and present as your ideas.
Common phrases

The evidence presented in this study demonstrates positive associations between patient experience and quality of care. This does not necessarily prove that improvements in patient experience will cause improvements in quality. However, evidence indicates that patient experience is clinically important. There is also some evidence to suggest that patients can be used as partners in identifying poor and unsafe practice and help improve safety.

• Doyle, *et al.* [2013] conclude that: “patient experience is clinically important”.
• As Doyle, *et al.* [2013] note: “patient experience is clinically important”.
• In their conclusions, Doyle, *et al.* [2013] state that: “patient experience is clinically important”.
• In their 2013 paper, Doyle, *et al.* write: “patient experience is clinically important”.

Dr Sean Murphy  10/10/2022
To paraphrase

**Original**

Doyle, *et al.* [2013] : “patients can be used as partners in identifying poor and unsafe practice”.

**Paraphrase**

• Doyle, *et al.* [2013] argue in favour of working with patients to discover inadequate practice.

• Doctors can form a partnership with patients to pinpoint areas of practice in need of improvement [Doyle, *et al.*, 2013].
Exercise G: paraphrasing

Possible answer:

The use of a helmet is key to reducing cycling fatalities, 75% of which are due to head injuries. By cushioning the head on impact, a helmet can reduce accidental injury by 85%, and save the lives of victims, half of whom are school children (‘Bike Helmets, 348).
Writing a skeleton article

1. Work in pairs.
2. Choose a topic.
3. Use the ‘Useful Phrases’.
4. Write your skeleton article.
5. Show it to another pair and ask for feedback.
Recommended books


More recommended books


End of Session 2

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