

HOW TO WRITE ACADEMIC RESEARCH PAPERS IN ENGLISH

1 ABSTRACT

- ... *stating the aim/hypothesis of your paper*
- ... *stating what testing method was used and what the results were*
- ... *stating the conclusion*

2 INTRODUCTION

- ... *stating the aim/hypothesis of your paper*
- ... *discussing relevant research literature*

3 MATERIALS AND METHOD

- ... *describing your experiment*
- ... *describing your calculations*
- ... *describing your model*

4 RESULTS

- ... *Example phrases for describing a graph/ figure/ table/ piechart*
- ... *describing the development of a graph*

5 DISCUSSION

- ... *mentioning the research question*
- ... *interpreting/explaining correlations/calculations*
- ... *interpreting results*
- ... *drawing back to prominent literature*
- ... *stating the conclusion*

Useful terms/ example phrases

Abstract

An abstract summarises the major aspects of the entire paper.

... stating the aim/hypothesis of your paper

- In this study, we investigated *e.g. the scent-marking behaviour of 20 male tigers*.
- Our aim in the present study was to investigate the...

... stating what testing method was used and what the results were

- In a test with *e.g. randomly interleaved sound levels*, we show that (...)
- We expected *e.g. marking patterns* to differ between (...), depending on (...)
- In a subsequent experiment, we looked at (...)
- The probability of (...) increased/ decreased... with (...)
- We did not detect any effect of (...)

... stating the conclusion

- We conclude that (...)
- We showed that (...)
- Our results suggest that (...)

Introduction

The introduction establishes the context, by discussing relevant primary research literature and summarising the current understanding of the investigated problem.

... stating the aim/hypothesis of your paper

- A long-term study of (...) provides an opportunity to look at (...)
- In this study, we investigated (...) and compared it with (...)
- We tested the following hypotheses (...)
- Specifically, we expected that (...)
- Our aim in the present study was to investigate the (...)
- This paradigm was used to investigate (...)

... discussing relevant research literature

- Current research proposes that (...)
- Many / Few studies have been conducted on (...)
- In recent years there has been considerable interest in (...)
- The first investigations into studies on (...) found that (...)
- Experiments on (...) were performed on (...) in *e.g. 2009* by (...)
- A number of studies have found that (...)
- *E.g. Drewes (2020)* argues that (...)
- *E.g. Drewes (2020)* reaches the conclusion that (...)
- *E.g. Drewes (2020)* provides several reasons for (...)

... other helpful phrases for the introduction

- Throughout this paper, the term (...) will be used to refer to (...)

Useful terms/ example phrases

Materials and
Method

The materials and methods section describes in detail all materials that were used to conduct the study, as well as the undertaken procedures /calculations.

... describing your experiment

- During the experiments (...)
- The procedure used is as described by *e.g. Drewes (2020)*.
- The instruments were utilised in the following way (...)
- The apparatus is composed of the following components (...)
- In accordance with (...), the apparatus was adapted in the following way (...)
- These modifications were made on the apparatus (...)
- To quantify the results (...) we performed the following test (...)
- Over the *e.g. 1-year* observation period, we recorded a total of (...)
- The basic time step used is a *e.g. 3-month period*.
- Data on (...) have been extensively analysed and are presented in *e.g. Table 2*.
- *E.g. The gas is compressed until it reaches a temperature of 85°C.*
- *E.g. The sample was gently heated until it reached a temperature of 23,4°C.*
- The resulting solutions contained (...)
- The sample was selected because (...)
- The sample consisted of (...)

... describing your calculations

- These calculations were made *with a calculator*.
- Transitions were calculated in (...)
- Major differences involved in calculating (...) are (...)
- To calculate (...), we used a readily available algorithm that (...)
- We outline the process of calculating *e.g. transitions* for (...)
- Statistical significance was analysed by (...)
- Subtracting (...) from (...), (...) is obtained as a result
- This approach allows for some level of error in the decision making of (...)
- The amount of error permitted by equation (...) is controlled by (...)

...describing your model

- This model was chosen because (...)
- Consequently, our model assesses the *e.g. consequences of dispersal* (...)
- We used simple simulations to generate (...)
- The model uses (...) *e.g. iterative, game-theoretic approach* to determine (...)
- To facilitate comparisons of the model output with field data, we also ran simple stochastic simulations to determine (...)
- *e.g. Three* assumptions are inherent in the model design (...)
- A simple algorithm for the model is given in the appendix.
- A randomly selected number of (...) were displayed in the model.

Useful terms/ example phrases

The results section reports the findings of the study. It states the findings of the research without providing an interpretation (graphs, figures, tables, charts etc.).

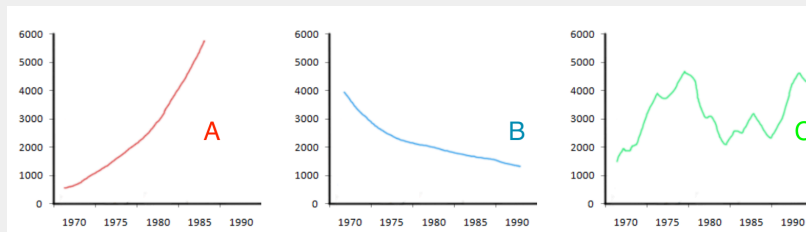
Example phrases for describing a graph/ figure/ table/ piechart

→ **useful verbs:** illustrate, show, exemplify, provide information, plot, as seen, describe,

- The graph **illustrates** the increase/decrease in road accidents.
- The increase in output is **shown** in Figure 4.
- Figure 2 **exemplifies** the complexity in weak D genotyping
- Figure 3 **provides information about** the water mass boundaries in this area.
- Monthly production figures were **plotted** on a graph.
- The decline/ increase in temperature is **illustrated** in Table 1
- During the study period 189 instances occurred **as seen** in Table 1.
- As **shown** in Table 1 (...) / Table 1 **shows** that
- Results of the experiment are **described** in Table 1
- Each sample tested positive for three nutrients **is shown** in Table 1.
- Table 1 **provides information** about the decrease in the birth rate, over twenty years.
- As seen in Figure 2, the ratio of female births to male births is 100:105.
- Table 1 **compares** the results of (...) with (...)

... describing the development of a graph

Results



A: rising: increase (of), growth (of), a peak (of), a rise (of), rocket, soar, leap

- The graph illustrates a **sudden rise of** intracellular calcium in rat taste cells.
- The graph shows a **rapid increase** in childhood overweight since 1980.

B: falling: a fall (in), a decrease (in), a decline (in), a dip (in), dive, plunge, plummet,

- The graph shows an **abrupt fall in** malaria transmission on day 7.
- The graph shows a **dramatic decrease in** the size of the basal ganglia after radiation.

C: fluctuation: a fluctuation (of), a variation (in)

- The Graph shows a **significant fluctuation of** prices in the timeframe of 2 years.
- The Graph shows **wildly varying levels** of Insulin levels in obscene children.
- Although the scatter is clearly larger for (...)

Useful terms/ example phrases

Discussion

The Discussion section interprets/ explains/ questions the results with regards to what was already known about the subject. The discussion draws back to the Introduction by mentioning the research questions and hypotheses and drawing back to prominent literature on this subject.

...mentioning the research question

- We collected data on (...)
- We analysed the current data set specifically to provide (...)
- The probability of (...) depends on the following components (...)
- To assess e.g. the discrepancy *e.g. spectral cues* were used to localise *e.g. sound-source azimuth*.
- An analysis was used to test (...)
- Changes in X were identified by using (...)

...interpreting/explaining correlations/calculations

- The correlation between (...) and (...) was tested.
- This correlation is related to (...).
- The correlation between (...) and (...) is interesting because (...).
- The first set of analyses confirmed the impact of (...).
- The most remarkable result to emerge from the data is that (...)
- The most striking observation to emerge from the data comparison was (...).

...interpreting results

- Our data show that (...)
- Our observation indicates that (...)
- The analysis presented thus far has /has not accounted for (...)
- The results show that there is a clear influence of (...)
- A variety of explanations may underlie the (...)

...drawing back to prominent literature

- Previous research has indicated that (...)
- The present study extends these findings by (...)
- Some of these studies reported *e.g. near-normal localisation performance*
- A recent study showed that (...)
- Our data is therefore in line with a previous study (...)

...stating the conclusion

- We conclude that, despite its ambiguity, the HSE dominates monaural sound localisation.
- Our results show a clear *e.g. degradation of both azimuth and elevation response performance*
- In conclusion results from (...) across different studies probably attributable to two factors: First (...) Second (...)