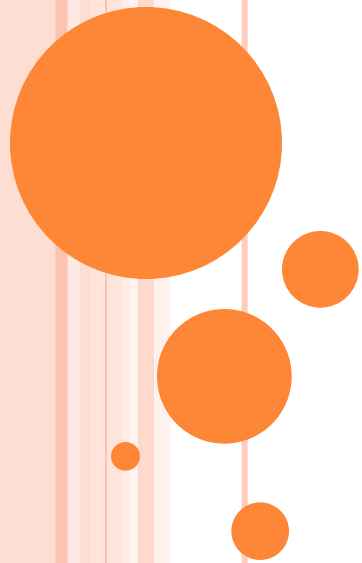


# THE RESULTS SECTIONS OF RESEARCH ARTICLES



# THE RESULTS SECTION IN A RESEARCH ARTICLE

Option 1	Option 2	Option 3	Option 4
Results <i>or</i> Data Analysis	Results <i>or</i> Data Analysis	Results and Discussion	Results <i>or</i> Data Analysis
Discussion	Discussion	∅	Discussion and Conclusion(s)
Conclusion(s)	∅	Conclusion(s)	∅



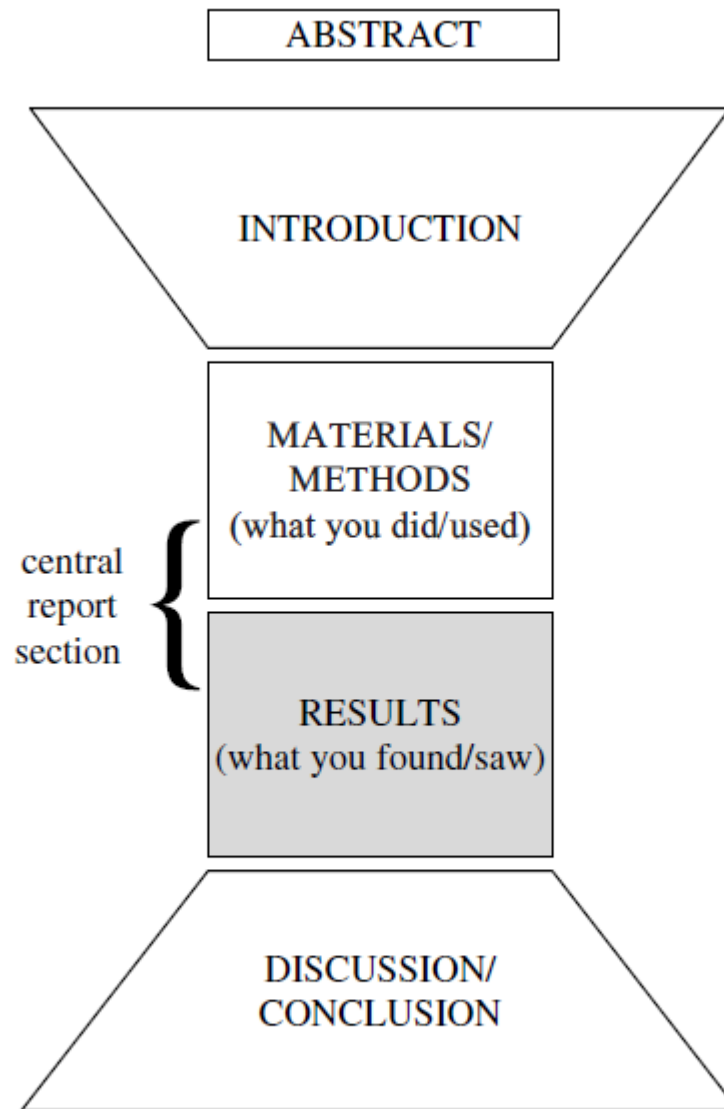


Fig. 1. The shape of a research article or thesis.



What is the difference  
between data and results?



# DATA VS. RESULTS

- Often used interchangeably despite being different
- **Data:** consist of facts and numbers presented in tables and figures
- Data can be manipulated to obtain a result
- **Results:** statements that summarize or explain what the data show
- Results give readers a sense whether one value is higher/lower than another or some data differ from other data in significant ways
- A result is supported by data



# DATA VS. RESULTS

Results statements:

After 80 visits, bees visited iridescent disks **more frequently than** after their immediate introduction to the arena [first 10 visits = 4.7; last visit = 8.1] (Fig. 4b)

The surface morphology at 65°C (fig. 5) was **smoother than** that at 35°C and 55°C (fig. 6).



What language is typically used in the Results sections of research articles?



# LANGUAGE OF RESULTS SECTIONS

Two important language characteristics of the Results sections:

1. The use of location statements
2. Comparative language

**Can you give some examples of each?**





# LOCATION STATEMENTS

Five patterns:

Pattern A	<i>The high rates <b>are shown in Table 3.</b></i>
Pattern B	<i><b>Table 3 shows</b> the high rates.</i>
Pattern C	<i>The rates were high (<b>see Table 3</b>) / (<b>Table 3</b>) / (<b>shown in Table 3</b>).</i>
Pattern D	<i>The rates were high, <b>as shown in Table 3.</b> <b>As shown in Table 3,</b> the rates were high.</i>
Pattern E (other, not A-D)	<i>The results, given in Table 3, show the high rates. Figure 3 is a photograph of the bridge.</i>



# COMPARATIVE LANGUAGE

- **Classic comparison:**

*The median wage of a college graduate is now higher than the median wage of a high school graduate.*

- **Avoiding repetition (the use of “that”):**

*The median wage of a college graduate is now higher than that of a high school graduate.*

- **Adding complexity (percentages, X times):**

*The median wage of a college graduate is now more than 70 % higher than that of a high school graduate.*

- **Adding hedging:**

*The median wage of a college graduate is now slightly more than 70 % higher than that of a high school graduate.*



What moves should a Results section of a research article include?



# THE STRUCTURE OF RESULTS SECTION

1. REVISITING THE RESEARCH AIM/EXISTING RESEARCH
2. GENERAL OVERVIEW OF RESULTS
3. INVITATION TO VIEW RESULTS
4. SPECIFIC/KEY RESULTS IN DETAIL
5. COMPARISONS WITH RESULTS IN OTHER RESEARCH
6. PROBLEMS WITH RESULTS
7. POSSIBLE IMPLICATIONS OF RESULTS



## THE STRUCTURE OF RESULTS SECTION

### 1. REVISITING THE RESEARCH AIM/EXISTING RESEARCH

- To what extent your study fulfills the aims you set out in the Introduction
- You might want to go back to the Intro and redefine the original aims in relation to the results you obtained

*The main purpose of this work was to...*

*In this work, we sought to establish a methodology for...*

*In earlier studies attempts were made to establish ...*



# THE STRUCTURE OF RESULTS SECTION

## 2. GENERAL OVERVIEW OF RESULTS

- Here, you summarize your methodology (highlight the important aspects of the materials, equipment or methodology you used to obtain your results)

*It is apparent that in all / most / the majority of cases...*

*In this section, we compare / evaluate / present...*

*The results are divided into two parts as follows:...*



## THE STRUCTURE OF RESULTS SECTION

### 3. INVITATION TO VIEW RESULTS

- You can't always write *Figure 1 shows...* Figures and tables don't always *show* things; sometimes they *present* things or *summarize* things.

*Figure 1*      *contains*  
*corresponds to*  
*demonstrates*  
*displays*  
*illustrates*  
*lists*



## THE STRUCTURE OF RESULTS SECTION

### 4. SPECIFIC/KEY RESULTS IN DETAILS

- The language used to describe specific results includes both language which provides objective description of the results (e.g., *lower*) and subjective, evaluative language or hedging (e.g., *significantly lower, slightly lower*)

Objective: *it was found, remains constant, did not occur ...*

Hedging: *in the majority of cases it was found, tends to remain constant, did not occur in general ...*





## THE STRUCTURE OF RESULTS SECTION

### **5. COMPARISONS WITH RESULTS IN OTHER RESEARCH**

- Make sure the location of the reference citation or number is accurate
- Remember that the right place for a reference is not always at the end of the sentence.

*As reported by Hyland (2010), ...*

*This is consistent with results obtained in [1].*

*The results are qualitatively similar to those of earlier simulation studies.*



## THE STRUCTURE OF RESULTS SECTION

### 6. PROBLEMS WITH RESULTS

- Remember that research is not made invalid by inappropriate results if they are presented in a conventional, professional way.

**Minimize the problem/focus on good results:**

*Although this was not obtained experimentally, it can be assumed to exist.*

**Suggest reasons for the problem:**

*.... was hard to control and is beyond the scope of this study.*

**Offer a solution:**

*... in future, it is advised that/case should be taken...*



## THE STRUCTURE OF RESULTS SECTION

### 7. POSSIBLE IMPLICATIONS OF RESULTS

- Provide a general explanation or interpretation of what your results might mean. This signals the move towards the Discussion/Conclusion. Use hedging expressions.

*This suggests/indicates/implies that...*

*It seems therefore that...*

*It could be inferred therefore that these may have ...*

Compare the two sentences:

- *We found that sunbathing is related to the onset of cancer.*  
**(NO HEDGING)**
- *It is thought that excessive sunbathing may sometimes be considered as contributing to the onset of certain types of cancer.*  
**(EXTREMELY HEDGED STATEMENT)**



# HEDGING

*We found that sunbathing is related to the onset of cancer.*

*We found that sunbathing was related to the onset of cancer.*

*We found that sunbathing may have been related to the onset of cancer.*

*We found **evidence to suggest that** sunbathing may have been related to the onset of cancer.*

*We found evidence to suggest that in **some cases/in many cases**, sunbathing may have been related to the onset of cancer.*

*We found evidence to suggest that in some cases, **excessive** sunbathing may have been related to the onset of **certain types of** cancer.*

***It is thought that** excessive sunbathing may **sometimes be considered as contributing to** the onset of certain types of cancer.*

