Unit 5 Results & Discussion

Part I Results

1 Elements of the Results section

Elements of the Results section		**Occurrence**
1 Research questions/hypotheses		Optional
2 Methods/approaches		Optional
3 The location of the results		Required
4 Presentation of major results		Required
5 Provision of specific data		Required
6 Comments	evaluation	Required
	comparison	Optional
	explanation	Optional

1) Locate the tables and figures where the results can be found
e.g., Table 5 summarizes the opinions of the women regarding the appropriate age for introduction of supplementary foods.
2) Highlight major results or findings
e.g., The result suggests that the perception of the temperature of a hot liquid can be modified.
3) Combine 1 and 2
e.g., Localized failure did not compromise the structural integrity of the web (see Figure 1).
4) Provide specific data to support the results or findings
e.g., Only 4% of the mothers believed that breast-feeding should be supplemented for infants under one month of age.
5) Provide comments (evaluation, comparison and/or explanation) on some of the results
e.g., The results are shown in Table 3. Remarkably, every classifier achieves significantly higher than random guessing.
The initial capacity and capacity retention were similar to the design of Paul (2011).
The result may be explained by considering the voltage distribution during freezing conditions.

Notes

1) Avoid copying the table titles or figure legends directly when locating the data.
Example
The table title: Table 5. Strategies used by Chinese scientists when writing a research article in English
Original: Table 5 shows strategies used by Chinese scientists when writing a research article in English.
Revised: Table 5 shows three major strategies Chinese scientists generally used when writing research articles for the publication in English-medium journals.
2) Some articles will combine Information 1 and 2, using a single sentence to highlight the important findings in the figures or tables and meanwhile indicate in

parentheses where the findings can be found.
3) Avoid presenting all the data in the tables or figures. Instead, you should choose the data which could well support the results and findings. Avoid duplicating in the text what has been presented in a table or figure. Instead, you might use qualifying adjectives which imply interpretation.
Example: Table 1 shows *a sizable difference* in the way in which different genders reacted to the advertisements.
4) Some articles will save comments for the Discussion section. But comments can also be found in the Results section though the focus is different. The comment in the Results section is mainly telling the reader what each result means (the data reported, or an image showed may not have a meaning unless they are explained and interpreted) and what similarity or difference it shows with a similar result in the past studies. The comment in the Discussion section, however, is to compare and explain the major findings or the whole picture instead of individual and separate results.

2 Data presentation

Suggestions on data presentation

1) Restrict tables and figures to those needed to explain the results of the paper and to assess supporting data.
2) Design and choose the appropriate tables and figures so that the comprehension will be more rapid and the message clearer.
3) Make figures and tables stand alone. That is, readers could understand the results presented in figures/tables without consulting the written text.
4) Number and present figures and tables in the order in which they are referred to in the text (figures and tables are number separately). Be sure that each table and figure is cited in the text.
5) Place the tables and figures in the attached appendixes if they interrupt one's reading when placed in the text.

Principles of data presentation

1) Writers should make ensure that the readers and reviewers be able to identify which specific hypotheses were supported, which had only partial support, and which were not supported.
2) Non-significant findings should not be ignored. They should be mentioned briefly in relation to the hypothesis.
3) Results of minor variations on the principal experiment should be summarized rather than included.

3 Data commentary

Though we often use the terms *data* and *results* interchangeably, they are in fact different. While data are a set of facts and numbers, results are the statements that summarize or explain what the data show. A result is supported by data. It is not easy to answer the question whether the Results section should include comments on the findings and if yes, what kind of comments should be made. The traditional view

holds that the Results section should simply devote to the reporting of the collected data. Another view accepts some brief interpretation of results but leaves the detailed and extended explanation to the Discussion or Conclusion section. Still other scholars prefer that authors include commentary in their Results section, for they think readers may want a timely explanation of the findings and cannot wait until the next section.

Structure of data commentary

The findings in some academic writings usually provide the following three elements of information.

Element 1: A statement that locates the figure(s) where the results can be found (Location elements);

Element 2: Statements that present the most important findings (Highlighting elements);

Element 3: Statements that comment on the results (Commenting elements / interpretations / implications).

While the first sentence directs the readers to locate a table or figure, the following ones present the major findings. The last sentence(s) give(s) brief comments on these findings.

Example

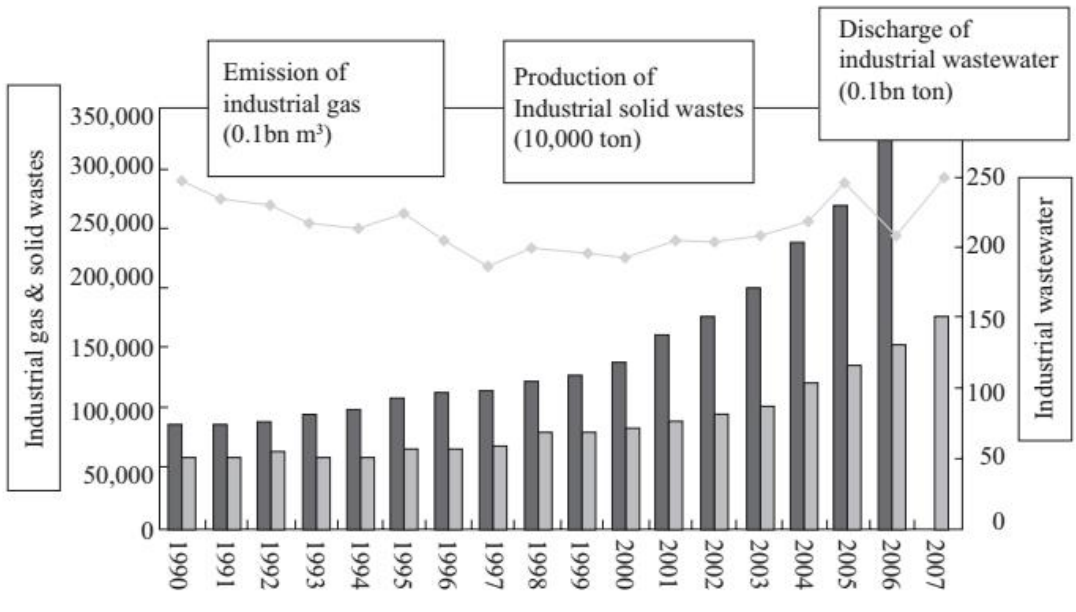

Figure 1 Generation of Industrial Wastes

[1] Figure 1 shows the amounts of pollution accumulated in China over the past two decades. [2] As can be seen, like economic growth, increases in pollution have been exponential. [3] In the five-year period from 2002 to 2007, for instance, the emission of industrial gas increased by 121% and the production of industrial solid waste increased by 84%. [4] This momentous increase in pollutant discharge reflects the fact that China is not fully prepared for elevated international economic status and is not proficient at handling the challenging environmental issues incurred by economic development.

Two Patterns of Organizing Commentary

You may put a short comment (one or two sentences) after each significant result you mention, or you may leave your comments until all the results have been presented.

ALTERNATING PATTERN	SEQUENTIAL PATTERN
Result 1 + Comment 1 ↓ Result 2 + Comment 2 ↓ Result 3 + Comment 3	Result 1 ↓ Result 2 ↓ Result 3 ↓ Comments

Note: The alternating pattern is best if you have many individual results with specific comments about each result. The sequential pattern is used when there are several individual results to which one or more shared comments apply.

Exercise

Directions: Read the following two *Results* sections and decide whether the authors used the alternating pattern or the sequential pattern in commenting on their results.

Passage 1

Three facts stand out in descriptive statistics by season in Table 1. First, the mean birthweight was 17 g smaller for summer than winter births. Second, gestational length was slightly shorter for summer than winter births. This fact was not obvious when the means were compared across seasons, but noticeable when the weekly proportions were compared. The lighter mean birthweight for summer births was related to the shorter gestational length, which prompted us to control for gestational length in specification. Third, except for the small seasonal differences in these two variables, no other variables exhibited notable seasonality. This fact anticipates that controlling for more variables would not considerably affect B1.

Passage 2

It can be seen that more than half of the respondents had heard of specific applications of biotechnology. Food production scored highest with 75%. In contrast to “heard of”, the figures for “think of” vary dramatically. In particular, the number of respondents who “think of” GM food and crops is almost five times less than the number of respondents who have “heard of” these applications. This result is not surprising, given that to have “heard of” an application would merely involve an impression of that application, not understanding and knowledge. “Thinking of” involves knowing something, and this in turn involves information and understanding. Therefore, this study verifies previous studies, suggesting that the Chinese public have heard of the word “GM food” but has little knowledge of the concept or process of genetic food modification.

4 Tenses in the Results section

1) Simple present: to locate the data in tables and figures; to report the results

e.g., Figure 3 shows the mean difference scores and SEM for the PANAS positive difference scores.

2) Simple past: to focus on what was done and found before the publication

e.g., 43% of these mothers introduced supplementary feeding to their infants before one month.

3) Simple present tense/modal auxiliaries/tentative verbs: to offer comments or explanation which are subjective and speculative

e.g., The findings accord with those from a larger study conducted by Waters (2011).

The results may be related to extensive post-modification.

Note: modal auxiliaries: might, could, etc.; tentative verbs: tend, suggest, seem, etc.