# Using tables to present information

**Southern Cross University**

# Studying in the Sciences

## What is in this guide

- Why use tables?
- General guidelines: what to consider
- General layout of a table
- Example of a table in APA 6th style
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This guide focuses on examples of tables that present numeric information, however, the same concepts can be applied to using tables to present text based information.

Because schools in the science disciplines at SCU typically use the APA 6th style guide, information in this document is constructed around APA style.

## Why use tables?

Tables (and/or figures) can be used to display numeric or written information. In particular, tables help you to organise and simplify how you present complex or detailed information, particular numerical data.

Tables (and/or figures) should be used to supplement the text of your assignment to help convey the information being presented. The table should be used for essential information, adding to, and not just repeating identical material already in the text. The table should not just appear in the text: you need to introduce the reader to the table by referring to the table/s in the text of your assignment, ideally before the table is presented.

**Note:** In many types of assignments, such as academic essays, the use of tables and figures is discouraged, whereas in other types of assignment, such as reports and proposals, their use is encouraged. It is important to check the requirements of your assignment task to determine if it is OK to use either tables (and/or figures) in your assignment.

## General guidelines: What to consider

The following guidelines identify what you should consider when determining if a table should be used and tips on how to present a table.

### Is the table necessary?

First, decide if the information is better conveyed in a text based form in the body of the document or if a table will **contribute to the reader's understanding** without just repeating what is in the text.

Generally, information that would require only two or fewer columns and rows would be better presented in the text rather than in table form (Purdue OWL, n.d.). If you have a large amount of information to convey, particularly numerical data, it is often a much more concise and clear way to convey it using a table.

The key thing is that the table should add information and further the reader's understanding, not just repeat what is in the text. Likewise, the text should not just repeat what is in the table.

### Can you understand the table without reference to the text?

A good table can be interpreted and understood independent of the text. The following tips will help you to develop a table that is easy to understand:

1. Overall, the information needs to be **organised** in a logical manner to facilitate understanding.
2. The **title** of the table should be brief, but clear, and tell the reader what information the table is providing.

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3. You need to ensure that the **columns have headings**. In many circumstances you might need headings for rows also.
4. Any **abbreviations or symbols** need to be explained in the note section at the bottom of the table.
5. If the table contains **data**, you need to include the appropriate units of measurement where relevant. These should be written in standard scientific notation. If you are referring to levels of significance or other types of statistical information ensure you use conventional abbreviations and symbols.

## What if the table (or information in it) is from someone else's work?

You need to reference the work of others. Like any academic work, if you have taken the entire table or information for your table, including data, from another source you need to reference this information correctly according to your School's referencing style (e.g. APA 6th). For your undergraduate assignments, this typically involves citing the author/s as well as the date and page where the material appears and then including the full citation in the reference list. For more information visit the University of Waikato's page on APA referencing examples under the Figures (including images) and Tables link (see for undergraduates) found at the bottom of the page.

## Let the reader know when to look at the information in the table

Because the table is either supporting the information in the text or the text is summarising or interpreting the information in the table, to help the reader's understanding, you need to refer them to the table wherever it is appropriate. This requires more than you just saying for example, see the table for more information. Explain to the reader what they should look for when they read the table: what their focus should be.

## Presentation: be clear and consistent

Tables need to organise information in a meaningful way that helps the reader easily understand the information.The table should present the information in a consistent form. For example, consider standardising units of measurement where appropriate. It might be confusing to present some data in centimetres then some in millimetres. If you were identifying plant species using common names in parts of a table and then using scientific names in other parts, this is not ideal.It is preferable to be consistent throughout. Likewise, if you are using more than one table in your document, you need to be consistent with how the information is presented without repeating the same information in the different tables.

Label each table in your document in the same order as it is referred to in the text. This method needs to be consistent for example: Table 1, Table 2, Table 3.
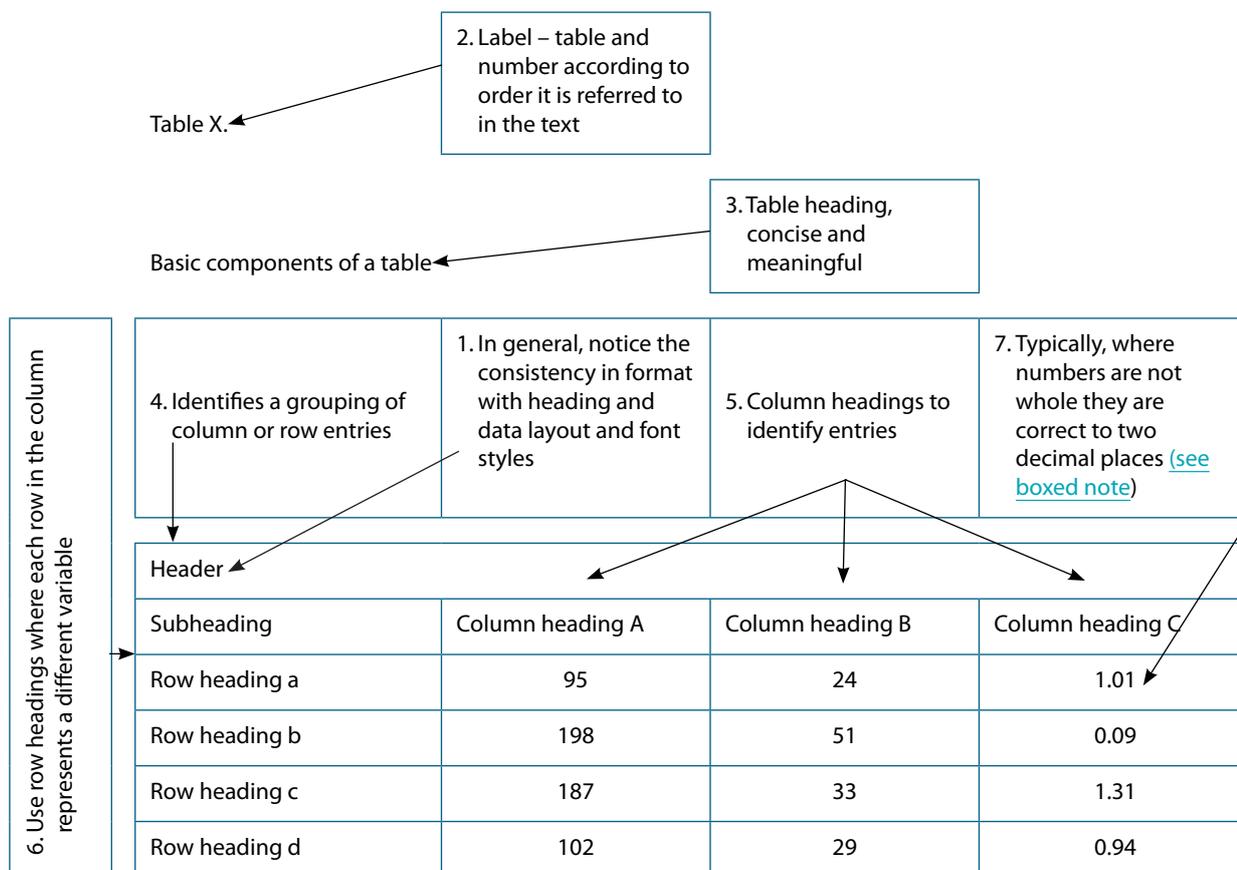
Numerical data must be expressed to a consistent number of decimal places. Generally, in APA 6th style, where numbers are not whole, this is correct to two decimal places (e.g. 45.67 not 45.67235). However, it is appropriate to provide more decimal places if the precision of the measurement requires this. For percentages, typically whole numbers are used (e.g. 56% not 56.23%).

Make sure you have defined all your abbreviations and symbols and provided any further explanations to allow the table to be understood independently in the note section of the table. This note needs to be as concise as possible.

# General layout of a table

The following identifies the basic components of a table as discussed above.

**Note:** style formatting may vary according to style requirements or instruction from unit assessor

2. Label – table and number according to order it is referred to in the text

Table X.

3. Table heading, concise and meaningful

Basic components of a table

| | 4. Identifies a grouping of column or row entries | 1. In general, notice the consistency in format with heading and data layout and font styles | 5. Column headings to identify entries | 7. Typically, where numbers are not whole they are correct to two decimal places (see boxed note) |
|---|---|---|---|---|
| Header | | | | |
| Subheading | Column heading A | Column heading B | Column heading C | |
| Row heading a | 95 | 24 | 1.01 | |
| Row heading b | 198 | 51 | 0.09 | |
| Row heading c | 187 | 33 | 1.31 | |
| Row heading d | 102 | 29 | 0.94 | |

6. Use row headings where each row in the column represents a different variable

Note (general notes and definition of abbreviations come first, this would include an in-text citation if the information contained in the table is not your original work)

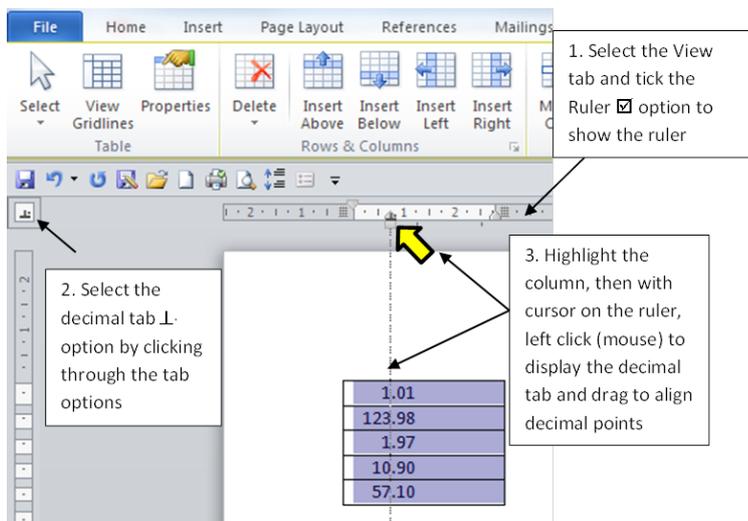Note (specific notes)

Note (probability)

8. Three types of table notes can be used and should appear in the order shown here. Each type of note is on a separate line. *General notes* include citations of other sources and abbreviations. *Specific notes* provide further clarification or details of information in the table. *Probability notes* are used for explaining symbols ( e.g. *, **) for p-value interpretation of levels of significance.

**Note:** A note on decimal places:

*Precision*: Be consistent with numerical values displaying similar things. Correct to 2 decimal places is generally acceptable.Where the precision of the measurement requires greater accuracy, more decimal place can be used.

*Presentation alignment*: Check with your Unit Assessor to see if there are any special requirements regarding alignment of numbers. Examples shown here have centred numbers in the column. APA 6th style requires aligning numbers in tables with the decimal points and centred under column headings. Tips on how to do this are given next.

👍 **Tip** | **How to align decimal places in a Microsoft Word table**



1. Select the View tab and tick the Ruler ☑ option to show the ruler

2. Select the decimal tab ⊥ option by clicking through the tab options

3. Highlight the column, then with cursor on the ruler, left click (mouse) to display the decimal tab and drag to align decimal points

# Example of a table in APA 6th style

Table labelled and numbered.

Succinct and informative title

Headers spanning columns to clearly identify the data.

Column headings

Sub-heading categorising the variables in the rows

Table 1

*Mode of Travel to SCU for Students Attending On-campus Classes*

| Transport method | Lismore | | Gold Coast | | Coffs Harbour | | SCU total | |
|---|---|---|---|---|---|---|---|---|
| | n | (%) | n | (%) | n | (%) | n | (%) |
| Motorised vehicle | 132 | (55) | 86 | (48) | 67 | (52) | 285 | (52) |
| Bicycle | 29 | (12) | 14 | (8) | 21 | (16) | 64 | (12) |
| Public transport | 56 | (23) | 37 | (21) | 22 | (17) | 115 | (21) |
| Walk/run | 24 | (10) | 41 | (23) | 19 | (15) | 84 | (15) |
| Other | 5 | (2) | 4 | (2) | 2 | (2) | 11 | (2) |

(Header: Number of students)

Row headings

Note: (Source: Smith and Jones, 2012, pp. 21–2). SCU = Southern Cross University.

SCU has three campuses located at Lismore, Gold Coast and Coffs Harbour.

The note provides: i) A citation of where the data comes from as it is not the work of the student (the full reference would appear in the reference list; ii) Defines the abbreviation (n is standard notation for number of participant and does not need to be defined); iii) Explanatory information identifying why there are three locations for one university.

# Referring to the table in the text part of the document

You can refer to the table in the text in either of the following two ways.

*Example 1*

As shown in Table 1, approximately half of all students used motorised vehicle transportation to attend university. This was the most common form of transportation at all three SCU campuses.

*Example 2*

Approximately half of the students surveyed travelled to SCU via motorised vehicle, irrespective of the campus attended (see Table1).

# Table checklist

(Adapted, in part, from American Psychology Association, 2010, p. 150)

☐  Is the table necessary?
☐  Does it contribute further details or understanding to information in the text?
☐  Is the title clear, concise and self-explanatory?
☐  Can you read the table without reference to the text in the document and understand what it is telling you?
☐  Does every column have a column heading?
☐  Are all abbreviations and special symbols (e.g. *, #, †, a etc.) explained in a note (at bottom of table)?
☐  If the table (or its information/ data) are from another source, is the source properly cited?
☐  Is the table referred to in the text with cross reference to the correct table label?
☐  Is the formatting and organisation within the table consistent?
☐  Are all comparable tables in the document presented consistently?

## Learning activity

The following data has been collected from the student's own study on gait (walking) in healthy adults. (***Note: data provided is hypothetical and is not meant to represent accurate content.***)

View the following table and from what you have learnt, evaluate the table using the above checklist.

After you have done this, follow the link at the end of this page to receive feedback.

If you want more information to help understand any of the variables in the table, see background information below.

**Table**   Results from experiment

|  | Males | Females |
|---|---|---|
| Step Length | 0.78 (0.17) | 0.66 (0.15) |
| Stride Length | 125–185 | 106–158 |
| Cadence | 129 | 117 |
| Speed | 1.19 (0.12) | 0.94 (0.21) |
| Base of Support | 8.1 (2.2) | 7.1 (4.1)[a] |

**Background information on variables in the table**

*Step length*:distance (cm) between the point of initial contact (heel strike) of one foot and point of initial contact of the opposite foot

*Stride length*: distance (cm) between successive points of initial contact (heel strike) of the same foot
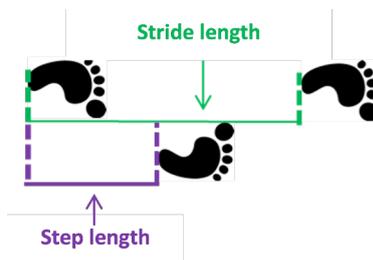


*Cadence*: walking rate given in steps per minute (steps/min)

*Speed* [= distance (m) / time (s)]: Distance covered in a set time period and should be recorded in meters/ sec

# Feedback on learning activity

Using the checklist to evaluate the table:

☐ Is the table necessary? *We don't know what is in the text associated with this table but it provides numeric information on five gait parameters for both men and women – so it would be a good way to represent this amount of data.*

☐ Does it contribute further details or understanding to information in the text? *It could be helpful, but the way the information is presented lacks clarity and is a bit confusing. There are no measurement units provided for the five gait parameters; the data is inconsistently presented and it is not stated what the values are. For example, some data appear to be ranges other appear to be means perhaps and it is not clear what the numbers in the parentheses represent. There is also inconsistency with how many decimal places the numbers are rounded to.*

☐ Is the title clear, concise and self-explanatory? *It is concise but does not really tell you what the table is about.*

☐ Can you read the table without reference to the text in the document and understand what it is telling you? *Elements of the table are unclear (see the second point of the checklist), making it more difficult to easily understand the information.*

☐ Does every column have a column heading? *YES*

☐ Are all abbreviations and special symbols (e.g. *, #, †, ª etc.) explained in the note (at bottom of table)? *NO – ª has not been defined.*

☐ If the table (or its information/ data) are from another source, is the source properly cited? *The table is data from the student's own work so a citation is not necessary.*

☐ Is the table referred to in the text with cross reference to the correct table label? *We do not have the information to answer this, however, the table is not clearly labelled (in terms of identifying the table number) so it would be problematic to correctly refer to this table in the text.*

☐ Is the formatting and organisation within the table consistent? *Overall, the general format layout of the table is organised and consistent.*

☐ Are all comparable tables in the document presented consistently? *Not applicable.*

The following provides a better example of how to present the information in table form:

| | Table label and number |
|---|---|

| | Title – clear, concise and informative |
|---|---|

Table 1.

*Gait Analysis: Kinematic Data for Healthy Adult Participants*

Units of measurement are provided for each variable. It is acceptable to use abbreviations that are standard units of measurement without defining them in the notes (e.g. cm).

|  | Males n = 17 | Females n = 18 |
|---|---|---|
| Step Length (cm) | 78.09 (17.10) | 66.22 (15.31) |
| Stride Length (cm) | 156.05 (23.05) | 132.39 (27.04) |
| Cadence (steps/ min) | 129.40 (17.23) | 117.38 (20.13) |
| Speed (m/sec) | 1.19 (0.12) | 0.94 (0.21) |
| Base of support (cm) | 8.10 (2.20) | 7.12 (4.10)a |

Data is presented consistently. Numbers are corrected to 2 decimal places. The type of values being displayed here are all means and standard deviations (SD). As a general note, it is OK to show different types of data e.g. ranges, percentages, confidence interval as long as you identify.

Note. All values presented are means and (SD). a data was only obtained for 14 of 18 female participants on this variable.

Rather than using centimetres here to be consistent with other data in the table, metres per second (m/s) are used as this is the standard unit for speed.

Notes are provided to: i) explain what the data represents; ii) provide an explanatory note about what the superscript symbol 'a' is referring to. This clarifies information in the table.

# Other related guides

Studying in the sciences: Using figures to present information

CTL Numeracy resources: Organising data – tables

# References

American Psychological Association. (2010). *Publication manual of the American Psychological Association* (6th ed.). Washington DC: American Psychological Association.

Purdue Online Writing Lab (OWL). (n.d.). APA tables and figures 1. Retrieved from https://owl.english.purdue.edu/owl/resource/560/19/