**Hand-out: Effective table design**

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| **Steps** |  | **Instructions** |
| Overall principles |  | * Use consistent formatting, alignment, title, headings format and symbols in all tables in a document
* Check your table can be understood without reference to the text
* Decide on a reasonable amount of data to be represented, not too little so that the reader does not understand you results, but not too much so that the reader is overwhelmed and confused. Limit your table to data that are relevant to your hypothesis
* Only include the necessary number of tables in your paper, otherwise, it may be redundant or confusing to the reader
* Do not use tables if you only have two or fewer columns and rows. In such cases, a textual description is enough
* Organize your tables neatly so that the meaning of the table is obvious at first glance. If the reader spends too much time deciphering your table, then it is too complicated and not efficient
* Remember that too many rows or columns could make it difficult for the reader to understand the data. You may need to reduce the amount of data, or separate the data into additional tables
* If you have identical columns or rows of data in two or more tables, combine the tables
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| Title |  | * Write an individualized and clear title for each table
* State the purpose or topic of that table
* Include the context of the data (the W’s: Who, What, When, etc.)
* Identify units of measurement, if the same for all or most variables in the table
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| Table notes |  | * Identify the data source (if not in table title)
* Define all abbreviations and symbols used within the table
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| Delineating columns and rows |  | * Use white space alone whenever space allows
* When you can’t use white space, use subtle fill colours
* When you can’t use fill colour, use subtle rules
* Avoid grids all together
* Leave line gaps after every four or five rows in a large table
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| Arranging data |  | Columns or rows * Arrange a set of categorical subdivisions across separate columns if they are few in number and the maximum numbers of characters in those subdivisions is not too large
* Arrange time-series subdivisions horizontally across separate columns
* Arrange ranked subdivisions vertically down the rows
* Coordinate row and column sequence with order of discussion for text tables

Groups and breaks* Use just enough vertical white space between groups to make breaks noticeable
* Repeat columns headers at the beginning of each new group
* Keep table structure consistent from group to group
* When groups should be examined independently, start each on a new page
* Use indenting or column spanners to show how adjacent rows or columns relate
* Make appropriate use of horizontal lines. Lines between rows are unnecessary, but lines below column headings and at the foot of the table add neatness

Label* Label each row and column clearly, briefly identify its contents
* Specify units of measurement or coding if not summarized in table title
* Always give units of measurement in table headings

Column sequence* Place sets of categorical subdivisions that are arranged down the rows of a single column to the left of the quantitative values associated with them
* Place sets of categorical subdivisions that have a hierarchical relationship from left to right to reflect that hierarchy
* Place quantitative values that were calculated from another set of quantitative values just to the right of the column from which they were derived
* Place columns containing data that should be compared close together

Value sequence* Whenever categorical subdivisions have a meaningful order, sort them in that order
* Use appropriate ordering for data or categories. Common orderings include chronological (earliest first), alphabetical, geographical, order of size of data value, or some other logical grouping that readers will recognise
* If your table compares data on two axes (e.g. area vs time), it is the comparison your readers are likely to be most interested in that should read downwards
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| Formatting text |  | Orientation and alignment* Avoid text orientations other than horizontal, left to right
* Align numbers to the right, keeping the decimal aligned as well
* Align dates to the left using a format that maintains a constant width
* Align all other text to the left
* Centre non-numeric data if they all have the same numbers of characters and the header is significantly greater

Number and date formatting * Place a comma to the left of every three whole-number digits
* When negative numbers are enclosed in parentheses, keep the negative numbers themselves right aligned with the positive numbers
* Place a percentage sign immediately to the right of every percentage value
* Truncate the display of whole numbers by sets of three digits whenever numeric precision can be reduced to the nearest thousand, million, billion, etc.
* Express months either as a two-digit number or a three character word
* Express days and months as two digits

Number precision* Report the fewest number of digits and decimal places needed for your topic, data, and types of statistics. Do not exceed the required level of precision
* Round numbers as much as possible. Try to round to two decimal places unless more decimals are needed

Font , emphasis and colour* Select a font that is legible, and use the same font throughout the table
* Boldface, italicize, or change the colour of fonts when useful to group or to highlight

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| Summarising values |  | * Provide column/row totals or other numerical summaries that can make it easier to understand the data
* Make columns containing group summaries visually distinct from details columns
* Place totals (if included) at right and bottom, not left and top. If this rule is broken – e.g. because the table is large and you feel that users would most usefully see the totals first – you should make it very clear which values are totals
* Place summaries in the group header if its rows extend down multiple pages
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| Giving page information |  | * Repeat column headers at the top of each page
* Repeat current row headers at the top of each page
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| Description text |  | * Make sure that your table is supplementary to your text and does not replicate it
* Refer to all tables by numbers in your text, e.g., Table 1, 2, 3...
* Describe or discuss only the table's highlights in your text
* Unless using a specific format style that requires that you place tables separately at the end of the report, place the tables near the text that refers to them
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