IA SEHS: Conclusion and Evaluation Template (CE)

*REMEMEBER - this is just a template to help you form your conclusion and evaluation. It must be written out in proper paragraphs for handing in. You may, however, keep the errors and improvements in tabular form.*

**Conclusion:**

1. Restate initial hypothesis:
2. Determine whether the original hypothesis was supported or not supported by the investigation.

*Circle one*

Supported **or**  Not Supported

1. Provide a minimum of 3 direct interpretations of processed data from DCP to support whether your hypothesis was or was not supported.
   1. Support Evidence 1- interpretation of graph
   2. Support Evidence 2- relevant calculated value from data table/graph
   3. Support Evidence 3- relevant calculated value from data table/graph
2. State the quantitative or qualitative relationship between your independent and dependent variable. Ex) strong/weak positive linear correlation, strong/weak negative linear correlation, formula for line of best fit etc.
3. Comparison to a similar study found through research. \*\*\*cite sources\*\*\*
4. Elaboration based on science learned, make connection to course content and life applications.

**Evaluation**

1. Discuss the overall “quality/reliability” of results.
2. Identify any anomalous results, such as outliers.
3. Explain anomalous results and/or potential sources of error

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| **Source of error** | **Significance of error** | **Suggested improvement** |
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1. Suggest a future study/investigation that could be done to enhance understanding of your research.

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| **Conclusion and Evaluation** | **Aspect 1: Concluding** | | | | |
| CE1.1 | Patterns and trends in data stated, with reference to the graph/ tables. |  | CE1.6 | Data related to hypothesis or RQ – to what extent to they agree/ disagree? |
| CE1.2 | Comparisons made within the dataset, where appropriate |  | CE1.7 | Appropriate language used *“Supports my hypothesis”* (not ‘proves’ or ‘is correct’) |
| CE1.3 | Comparison with published data and theoretical texts, if possible. |  | CE1.8 | Suggestions for further investigation stated |
| CE1.4 | **Scientific explanation** for results, with justification |  | CE1.9 | Sources cited appropriately |
| CE1.5 | Associated qualitative data add value to explanations. |  |  |  |
| **Aspect 2: Evaluating procedures** | | | | |
| CE2.1 | Reference to error bars (or STDEV) with regard to variability of results and validity of conclusions |  | *All of the following evaluated in terms of possible effect on data and magnitude of error. Could be clearly presented as a table.* | |
| CE2.2 | Analysis of sufficiency of data to address the aim/ RQ |  | CE2.6 | Random biological variation |
| CE2.3 | Analysis of appropriateness of the range of IV values with regard to the aim/ RQ |  | CE2.7 | Measurement/ instrument errors |
| CE2.4 | Anomalous points identified and explained, where appropriate |  | CE2.8 | Systematic errors (problems with method) |
| CE2.5 | Associated qualitative data referred to where appropriate. |  | CE2.9 | All other limitations relevant to the investigation |
| *Time management* or *human error* may be mentioned, though these are not scientific errors – they should be eliminated with effective *Manipulative Skills*. The focus here should be on *the investigation*. | | | | |
| **Aspect 3: Improving the investigation** | | | | |
| Improvements for the limitations or sources of error above: | | | | |
| CE3.1 | Are realistic and achievable |  | CE3.3 | Are specific and clearly explained |
| CE3.2 | Address the RQ or aim quantitatively (improving control of IV, DV and CV) |  | CE3.4 | Are cited where improvements relate to published protocols or techniques |