

# Tips on writing and structuring a practical science investigation report

[Business](#)



Introduction: | | background to the problem | Explain what the problem is and why it is important. | | literature review | Discuss the research that other people have done and what has been written on the subject. | | | Refer to the SACE Board of SA Guidelines for Referencing. | research question | State your research question, the area that you believe requires further study, and what | | and/or | you believe could be done to shed more light on the question. | | hypothesis | Formulate your hypothesis, your carefully worded statement of the prediction that you | | | intend to test.

| | | | Method: Describe how you conducted your research. | subjects (if any) | How they were selected, how many. | | ethical considerations | E. g. informed consent, respect for individuals, acknowledgment of sources. | | | Refer to SACE Board of SA Guidelines on Conducting Ethical Research.

| | materials used to gather data | E. g. chemicals; equipment; survey forms (how developed, tested). | | procedure used to gather data | E. g.

survey (how did you proceed — phone, questionnaire? ), temperature, incubation period. | analysis | How did you analyse the data/results? What statistics did you use? | | | | Results: | Report the results of the collected data and their analysis. Do not discuss what they mean | | | here. | | tables, graphs, and diagrams | Present them so that they show the answer to the research question and hypothesis. | | Tables, graphs, and diagrams should complement or add to what you are saying. | | | Give titles that describe them fully.

Number them Table 1, 2, ... ; Figure 1, 2, ... (Figures | | | are graphs and

diagrams) | | | Label the parts (e. g. axes, key) clearly. | | Discussion: Review <https://assignbuster.com/tips-on-writing-and-structuring-a-practical-science-investigation-report/>

the results of your work in the light of your research question/hypothesis. |  
 hypothesis | Was the hypothesis supported? | | literature review | How did  
 the results compare with what others have done/written? | | | Could others  
 contradict your conclusion, and if so, how would you answer them? | | | Refer  
 to the SACE Board of SA Guidelines for Referencing.

| | reflection | Why did the results happen the way they did? | | | What  
 should you have done differently? | | Could the results have been explained  
 differently? | | implications | How could the results be used / put into  
 practice? | | | Are there implications for other issues apart from the research  
 question? | | unexpected results | Did anything else interesting arise from the  
 results? | | further research | Did your work suggest other research that  
 might be conducted? | | | Conclusion: | Summarise your argument and  
 findings. See relevant subject outlines (Stage 1) or | | | curriculum  
 statements (Stage 2) for the structure of your conclusion. | | | | References:  
 | List the sources you referred to in your report. Refer to the SACE Board of  
 SA Guidelines | | | for Referencing. | | | | Appendixes: | Include  
 questionnaires, sample release forms, and other relevant documents that  
 you used in | | | your research. | | | List them Appendix A, Appendix B, etc.

| Key terms There is very little that can be stated conclusively in research. A  
 variety of words are used to indicate the basis upon which you make your  
 statements. | Argue | To give evidence and reasons | | Assert | To state or  
 declare that something is true | | Assume | To accept that something is true  
 without evidence or proof | | Claim | To assert that something is true |  
 Conclude | To come to an answer by reasoning | | Define | To mark out the

limits of something, to describe exactly the nature, scope, or meaning (Concise Oxford | | | Dictionary) | | Demonstrate | To show that something is valid; to provide evidence that it is valid | | Discover | To find or become aware of or observe for the first time a fact, existence, presence | | Hypothesise | To suggest an explanation as to the cause of something, in such a way that it can be tested | | Indicate | To suggest (e. g. the evidence suggests or indicates or points to) | | Prove | This term is not used in research, except in mathematics. Instead, use demonstrate.

| | Question | To seek information | | | To doubt the validity of something | | Suggest | See indicate | | Test (a hypothesis) | To carry out a procedure designed to determine whether or not a hypothesis can be supported. | When you read, pay attention to the different ways that people indicate the relationship of their work to the truth. Words such as indicate, demonstrate, prove (not used outside of mathematics), test (a hypothesis), hypothesise, suggest, assert, question, claim, conclude, argue, discover, define, and assume do have very specific meanings in academic discourse. Bibliography Baron, J. , Rescorla, R. , & Seligman, M.

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