

Update/adaption of "Strauss Guidelines"

Reference: Strauss, Samuel. The Journal of Educational Research, Vol. 63, No.4, December 1969.

1. Problem stated: Is the problem stated clearly? Is it important and worthwhile? Does the problem statement lead naturally to the succeeding steps in the research?
2. Previous work cited: Is there evidence of a good literature search and a grasp of the current "state of the art?"
3. Objectives stated: Are the ultimate goals or socially useful reasons given for solving the problem?
4. Hypotheses formulated: Are reasonable and rather focused or narrow generalizations given to be tested during the study and either accepted or rejected? (Look for research hypotheses to be stated in the "null hypotheses" since in research it cannot be proved that something is so; it can only be proved that it is not so, given the circumstances present in the research study.)
5. Assumptions made: What does the researcher want conceded without needing to "prove" it? The more rigorous the research, the fewer assumptions, or unprovable factors, are included. Some may be honestly stated, while others may be slipped in without acknowledging them.
6. Population studied: Is the population used in the study carefully described? Is it large enough and heterogeneous enough to represent a "normal" population or target population?
7. Sample drawn: Is the sample drawn randomly to truly reflect the characteristics of the population? (This is a big factor in external validity - the sample must truly represent the accessible population which, in turn, must truly represent the target population for which generalizations are being made. This constraint is the primary one which distinguishes true experimental research design from quasi-experimental research design.)
8. Instruments used: Have the tests or measurement devices used been validated and is the evidence provided for their validity, i.e., have they been shown to truly measure what they purport to measure and to do it with reliability, that is on a regular predictable basis?
9. Design examined: What is the design of the research? Are variables identified as dependent and independent, data-collection methods clearly described, and any statistical procedures clearly explained and presented as part of the design description?
10. Procedure followed: Could this research be replicated by the reader with the information provided in the report?

11. Safeguards taken: Are possible sources of error and bias anticipated and guarded against?

Some examples would be to run a pilot study to pretest instruments and procedures, to train research assistants, to replicate, to call on expert judgment, etc.

12. Observations recorded: Are the primary sources of raw data reported so that readers can examine them and make their own judgments rather than being forced to rely on only the researcher's interpretation?

13. Findings assembled: Are summary tables, graphs, and/or charts presented in a self-explanatory manner? Is anything left out without being explained?

14. Statistics interpreted: Are statistics and statistical results explained in clear terms so that logically thinking persons without statistical background can follow the case or argument?

15. Interpretations discussed: Are the findings examined from many angles and are all possible meanings extracted from the data?

16. Conclusions reached: Are the hypotheses accepted or rejected? Are the conclusions stated justified by the research? Watch out for "fudge factors" and overgeneralizations or unwarranted conclusions.

17. Limitations recognized: Does the investigator caution the reader about weaknesses in the research and possible overgeneralizations the reader might make?

18. Further work projected: What are the next logical steps or possibly better ways of replicating or extending the research study?

19. Improvements suggested: Is there any good advice offered by the researcher based on hindsight? "If this study were done again, here's how we'd do it better."

20. Clarity of report: Was the research report easy to follow and understand? Remember, if a serious reader cannot understand it, the project was a waste of time.

Recommendations: Read the article more than once. Write the analysis step by step without jargon. Use the pronoun "I" and express your opinion. Criticize freely and fairly - pointing out the good and the bad. Admit when you don't understand something. Caution: These Strauss guidelines tend to apply to quantitative research reports - experimental, quasi-experimental, and data-based survey research. The principles have to be used selectively to critique other types of research - historical, descriptive, case study, analytical, ethnographic, etc. The importance given to internal and external validity, the use of tests, the types of tests used, the issue of generalizability, etc. is challenged by qualitative researchers. Practice applying the Strauss guidelines enables you to write abstract/critiques without writing all the steps each time.

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