HOW TO READ AND EVALUATE AN EMPIRICAL RESEARCH ARTICLE

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Unfortunately, there is a tendency for people who read published research to accept uncritically what the authors claim to have learned or “proved,” especially when it is in an academic journal. While we will do our best to publish articles based upon sound research, all research has limitations and readers have to be careful what they conclude from what they read.

This brief primer is intended to orient you to the kinds of issues you should pay attention to as you read and evaluate articles that report empirical research. It does not go in depth into all of the issues you might need to consider, especially with a complex research effort, but it does identify several basic issues that can guide you in determining what the strengths and limitations of a research effort are and what you can legitimately take away with confidence from the report. I hope you will find this beneficial as you read research articles in the Christian Education Journal and other publications.

When you read and evaluate a research report you need to carefully examine three basic issues:
   (1) Why and how the study was designed and carried out,
   (2) How the data analysis was carried out and the findings that resulted, and
   (3) The legitimacy of the conclusions and implications drawn from these results.

Here is an overview of several major questions you should seek to answer in your evaluation that will help you in determining what of value can be taken and used from the research:

[Note: There may be other important issues to consider, depending on the exact type of research being reported (e.g., experiment, ethnography, causal-comparative, case study). Basic texts on research design and evaluation can assist you with more in-depth analysis.]

Preliminary Issues
1. Was the study described and carried out in an unbiased manner, or does it appear to be biased in some way by the researcher or the data gathering or analysis processes? Do you have any concerns that make you cautious in making use of the results of the study?
2. Was recent relevant research considered in the literature review that informed the development of this study? Is it well grounded in the work and insights of those who have come before? If not, what seems to be weak or missing?
3. Are the main research questions/issues/phenomena well defined for investigation? Are the researchers clear on what they really want to learn, and the things they are examining to get there? Do they seem like good ways to define the issues, or do they seem limited or misguided in some way?

Population and Sample Issues
4. Who appears to be the “target audience” of the study? By the end of the article, whom do the researchers seem to be applying the results of the study to?
5. Does the accessible population from which the sample is drawn fairly represent the target population? If not, what seem to be the limiting issues?
6. Is the sample a good sample for the purposes of this study? (e.g., how it was selected, size, subgroup representation, relevant for the issues being studied)
Data Collection Issues
7. Were the times and places of data collection at least a fair representation of the phenomena being studied? Do you have any concerns with this aspect of the study?
8. Were the primary methods of data collection appropriate for use with this population and sample? Any problems or concerns to note?
9. Were the research procedures presented clearly enough so they could be replicated by another researcher? Was enough information reported that you can evaluate their appropriateness?
10. If an “instrument” was used for measuring a construct/phenomena, is there evidence of its validity and reliability for its intended use, and is it appropriate for use with this sample? If there are any concerns, how should this inform your use of the results of the study?
11. If qualitative data gathering procedures were used, were they beneficial and of sufficient intensity and quality (e.g., duration, inside perspective, triangulation) to have confidence in the results reported?

Data Analysis Issues
12. If quantitative data analysis was used, were the tests/techniques used appropriate to the type of data (nominal, ordinal, interval), size of sample, number of groups, and research questions being answered? Was enough information reported to evaluate this important part of the study?
13. If qualitative data analysis procedures were used, was enough data description given to see how the variables emerge from the data? Are multiple sources of evidence used? Is evidence of careful, thorough analysis shown?

Discussion of Results
14. Do the results of the data analysis support the researcher’s conclusions? Are the conclusions reasonable and justified? Are appropriate limits placed on the conclusions in light of the limitations of the study?
15. Are the implications for practice presented by the researcher reasonable ones given the findings? Are the generalizations warranted and appropriately qualified given the limitations of the study?
16. If the findings of this research conflict with those of previous research, does the author provide reasonable rationale for the differences?

Final Key Issue
Given that all research has some limitations, are the limitations of this study acceptable for utilizing the findings and conclusions, or is there reason to be cautious in accepting and using these results? Who do they seem to fit? Who might you not want to apply them to just yet? How do the results compare with studies done by other researchers? If there are differences in the results, what might account for them? If necessary, what additional work would need to be done before you feel you could accept and apply the results with some confidence?

May your reading and research be fruitful!

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