



Research Reading Guide of the Month
MAY 2004

Locke, L.F. (2004).

Don't be Confused by Conflicting Results.

It is understandable when newcomers to research make the assumption that if several different studies find conflicting results the investigations must have been defective and should thereby be disregarded. That logic, however, does not fit the realities of research and leads to the false conclusion that nothing can be learned when findings diverge. While it certainly is true that the final goal in research is to achieve congruent and replicable findings across studies, divergent results often represent valuable steps toward that objective.

It is a fact that apparent conflicts between or among studies are not uncommon, and that is particularly so in the early stages of inquiry into complex problems. In turn, that can lead to concerns at two levels: (1) doubts about the truthfulness and dependability of the research process itself, and (2) questions about the adequacy of the studies involved. It boils down to a basic question, "How can two studies involving the same question produce different results and both still make legitimate claims to validity?"

In the majority of cases, the answer is disarmingly simple. Divergent results can be produced by differences (sometimes quite small) between or among studies in terms of the procedures, participants, measures, or the modes of analysis employed. The studies may have been perfectly competent, but the results reflect the study of apples in one case and oranges in the other. For example, it often does not take large and obvious differences in measurement protocols to produce significantly different results from closely similar groups of participants.

Once a number of studies have accumulated, the comparison of generally similar studies often illuminates likely suspects for the source of divergent results. That process leads to further understanding of the variables involved, and ultimately to the design of studies that either replicate faithfully, or, produce results that diverge in predictable ways.

In some instances, one or several apparently sound studies may produce results that remain outside the main line of findings from the majority of similar investigations – without discovery of any satisfactory explanation. In the forms of social research often employed in physical education, the appearance of such outliers is inevitable, if only because of the enormous complexity presented by human participants. What matters for our evolving understanding of how things work, however, is not the occasional presence of discrepant studies, but the establishment of a line of research studies wherein agreement does persist – thus forming a reliable basis for devising improvements in practice.

A learning curve exists for the design of research in any complex area of inquiry, but as studies accumulate so does sophistication. Accordingly, when you come upon apparently similar studies in which the findings appear to be in conflict (in whole or in part), don't discard the reports as worthless. To the contrary, you may find that they can provide an invaluable opportunity to exercise both research knowledge and common sense. Read closely and ask yourself, "Where were there differences in these studies that might be expected to push results along diverging paths?" Allow yourself to speculate if potentially important details are not made explicit in the report. Quite often an appealing hypothesis will become evident, along with a richer appreciation of the matter being investigated.

When people complain that research sometimes seems to point in different directions at the same time, their frustration is understandable. Research can do exactly that – and such discrepancies are

bound to attract negative attention. But when others cite such conflicts as evidence of the inadequacy of research (or researchers), you can nod knowingly to yourself and wonder how the studies in question might actually have been different, or, wonder how many other studies have been done that actually produced perfectly congruent findings. Those are the questions pondered by the more sophisticated consumer of research.

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