

What It Means To Be Critical [about Psychological Research]

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We often ask students to ‘critically assess’ research, but we probably don’t explain what we mean by this as well as we could. Being ‘critical’ doesn’t mean merely criticizing, just as skepticism isn’t the same as cynicism. A cynic thinks everything is worthless, regardless of the evidence; a skeptic wants to be persuaded of the value of things but needs to understand the evidence first.

When we ask students to critically assess research we want them to do it as skeptics, not cynics. Students should praise, as well as blame, a study, but it is important that students explain why. I distinguish three levels of criticism:

General criticisms: These are the sorts of flaws that we’re taught to look for from the very first moment we start studying psychology: things like too few participants or the study being carried out on a selective population (such as university psychology students). These are general criticisms because they are flaws of a lot of studies. Because these criticisms are so common, it’s not very interesting to point them out. Far better if you can make ...

Specific criticisms: These are things that are specific weaknesses of the study you are critiquing. Finding specific criticisms means thinking hard about the logic of how the measures relate to psychological concepts (operationalization) and what the comparisons made (control groups) really mean. A good specific criticism will be particular to the details of the study, showing that you’ve thought about the logic of how an experiment relates to the theoretical claims being considered (that’s what makes this type of criticism more specific). Specific criticism is good, but even better are...

Specific criticisms with suggestions: This means identifying a flaw in the experiment, or a potential alternative explanation, and simultaneously suggesting how the flaw can be remedied or the alternative explanation can be assessed for how likely it is. This is the hardest to do, because it is the most interesting. If you can do this well, you can enhance our understanding of what is really true and guide our research so we can ask more effective questions next time. Exciting stuff!

Let me give an example. A few years ago I taught a course that used a wiki (reader edited webpages) to help the students organize their study. At the end of the course I thought I’d compare the final exam scores of students who used the wiki against those who hadn’t. Surprise: Students who used the wiki got better exam scores. An interesting result, I thought, which could suggest that using the wiki helped people understand the material. But a specific criticism is that the data were correlational rather than causal (there was no control group). There could be all sorts of differences between students who score better on the exam and use the wiki more. A specific criticism with a suggestion would be to repeat the “study” but randomly assign students to use the wiki or not or even randomly assign students to use the wiki a little, a lot, or not. That’s what we mean by specific criticism with suggestions.

As you get the hang of critically assessing studies you’ll see that you are able to both assess the various flaws a study has and suggest how to fix those flaws. You don’t get marks just for identifying flaws, particularly not when the flaws are the easy ones (small and non-generalizable samples). All studies have flaws; the interesting thing is to make positive suggestions about what can be confidently learnt from a study, while noting the most important flaws, and – if possible – suggesting how they could be dismissed or corrected.