

p (psychology) <. 05: Integrating research methods into the psychology curriculum

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The teaching of research methods (including both research design and statistics) in psychology has drawn considerable attention in the literature over recent years, and debate is ongoing as to how best to incorporate these topics within the curriculum. However, a survey of American and Canadian universities (Aiken, West & Millsap, 2008) found that the perception of faculty is that few students leave their programs prepared to apply all but the most basic research methods. Based on a review of the teaching literature¹ and my experiences teaching research methods during a weekly three hour lab in a third year honours seminar as a teaching assistant over the past two years, I suggest proposed changes to better integrate this important topic in the teaching of psychology.

When considering that students are required to use letters of the Greek alphabet (e.g. α , β , γ) to represent various statistics, and that research methods prescribe various specific meanings to words that are often used colloquially (e.g. significant, correlation, mean, variance, etc.), it becomes apparent that research methods is much like learning a new language. While a student would not be expected to learn to write a language before learning how to read it, it is interesting that this is often the approach taken in research methods courses in

psychology. Even the APA Guidelines for the Undergraduate Psychology Major, do not make reading psychological literature a learning objective. As students do not necessarily enter a psychology program able to read a journal article, a greater emphasis on teaching this fundamental skill to students in their first year would be highly beneficial. While most first year courses are largely reliant on textbooks that distil information into key points, moving towards introducing original research earlier in an undergraduate degree appears warranted to address this important, but overlooked objective.

A second area that is often overlooked is the impact of disintegrating the designs and analyses from psychological theories. Disconnecting research methods from theory also runs the risk of being unable to meet the needs of students from different areas of psychology, which require different research methods and analyses depending on their questions of interest and the practical and ethical realities specific to them. As it would be impossible to cover all statistical and methodological options required by all areas in a single course, assuming a one size fits all approach may have dramatic consequences on both student and faculty satisfaction. Claire Wagner and David Maree surveyed South African faculty and concluded that “it is often the ‘bigger’ departments that decide on the content of the curriculum and assume that it is applicable to all other departments. Consensus by a majority can thus leave the minority feeling

¹ In keeping with the editorial aims of Psynopsis, this article provides a high level summary of the results of this review. An academic manuscript and reference list is available upon request from the author.

| FIRST YEAR | SECOND YEAR | THIRD YEAR | FOURTH YEAR |
|--|--|--|--|
| <p>Reading Research</p> <p>Sample activity: identify alternative explanations for a finding or applications of the finding to their field of interest</p> | <p>Choosing the right methods and analyses</p> <p>Sample activity: propose an alternative design or analysis for a study in their field</p> | <p>Analyzing and Interpreting Data</p> <p>Sample activity: provide output and have students interpret it.</p> <p>Optional: have students produce their own output</p> | <p>Reporting Results</p> <p>Sample activity: an honours thesis. For policy/applied students, a briefing note, poster or presentation for stakeholders</p> |

left out of the process.” (Wagner & Maree, 2007, p. 126). For smaller areas of psychology, this may explain why previous research has found that student perceptions of the utility of research methods and interest in research activities decreased. It may therefore be more appropriate to focus all instruction of advanced research methods within existing upper year honours seminars and other subject specific courses rather than offering a single statistics and methods course separate from subject content.

Responding to the range of potential career goals that psychology majors have could also strengthen the teaching of research methods. Different career paths each require significantly different skill sets as they relate to research methods. While the current model of spending considerable time teaching theory, calculation and interpretation might benefit an academic, a student interested in either front line clinical or counselling professions or in policy development may need more focus on interpreting and applying results to real life situations. To better simulate a real world situation, students with different interests could continue to take courses together and complete group assignments that are tailored to their career goals. For example, the policy/clinically oriented students could define the research questions and provide the background information about the area, and the research oriented students would

take this information to design, analyze and present results to the policy oriented students who could then evaluate the findings and propose a solution to a problem in their area.

While there are many strong points to the teaching of research methods and statistics in psychology that are not discussed here due to space limitations, better integrating this teaching offers considerable potential to ensure that future psychologists are best equipped to continue advancing the field and our understanding of human behaviour. A proposed sequencing of learning objectives with sample activities aimed at this integration and scaffolding of learning is presented in the figure below.

References

- Aiken, L.S., West, S.G., & Millsap, R.E. (2008). Doctoral Training in Statistics, Measurement and Methodology in Psychology. *American Psychologist*, 63(1), 32-50. doi: 10.1037/0003-066X.63.1.32
- Wagner, C. & Maree, D. (2007). Teaching research methodology : implications for psychology on the road ahead. *South African Journal of Psychology*, 37(1), 121-134. Retrieved online March 17, 2011 from <https://repository.up.ac.za/upspace/handle/2263/3482>