Journal of Statistics Education

Letter to the Editor

David L. Neumann
Griffith University

Journal of Statistics Education Volume 17, Number 2 (2009), www.amstat.org/publications/jse/v17n2/neumann.html

The report by Wiberg (2009) on teaching statistics in the nonmathematical discipline of psychology made for interesting reading. The general low interest, high anxiety, and lack of appreciation of the importance of statistics in students have been familiar themes in my experience when teaching psychology students. Empirical research also supports these impressions (e.g., Pan & Tang, 2005; Tremblay, Gardner, & Heipel, 2000).

I wish to comment on the main theme of the report, that of teaching statistics in integration with psychology. Like many other reports on teaching practices, Wiberg (2009) has emphasised the application of teaching practices within an individual course. The course was part of three out of four psychology modules offered during the semester. While it is necessary to begin the integration within an individual course, I would encourage teachers to also consider the problem more broadly. In non-mathematical disciplines, statistics should be integrated across the entire program/degree that the student is enrolled in. The integration should be taken seriously by teachers in the other, non-statistics courses (e.g., cognitive psychology, developmental psychology, abnormal psychology as examples in a psychology degree). If statistics truly is so important for a discipline, it should not be difficult for a broad, program-wide integration of statistics.

We have attempted to provide greater integration of statistics across the many courses offered in the psychology degrees at our university. Strategies that can help to achieve this include (a) informing other teachers of the statistical knowledge gained by students as they progress through each semester of the degree, (b) actively encouraging the discussion of statistical concepts in non-statistics courses, particularly outside of the standard ‘lab report’ format, (c) providing revision of specific statistical concepts within the context of the non-statistics course (e.g., revision of correlation within the context of assessing reliability in a course on psychological assessment), and (d) supporting the critical evaluation of the results in published research reports in non-statistics courses.

It is hoped that a broader, program-wide approach to integrating statistics with psychology will enrich the student’s knowledge of not only statistics, but also of the content courses. Further, students will gain greater appreciation that statistics is a tool to be used in psychology, just like an IQ test, interview skills, or surveys. It goes without saying that this approach could also be adopted in other degrees in the social sciences.

References

Pan, W., and Tang, M. (2005), "Students’ perceptions on factors of statistics anxiety and instructional strategies", *Journal of Instructional Psychology*, 32, 205-214.

Tremblay, P. F., Gardner, R. C., and Heipel, G. (2000), "A model of the relationships among measures of affect,

previous achievement, and performance in introductory statistics", *Canadian Journal of Behavioural Science*, 32, 40-48.

Wiberg, M. (2009) "Teaching Statistics in Integration with Psychology", *Journal of Statistics Education, 17(1)* (amstat.org/publications/jse/v17n1/wibergpdf.html)

David L. Neumann
School of Psychology
Griffith University
D.Neumann@griffith.edu.au
