

APS Interest Group on Psychology Education

Resource Material Submission – SUMMARY ONLY

Title of Material	Statistics Psychology Practical for Introductory Psychology Using e-Instrumentation.
Author(s)	Sabina Kleitman, Margaret Charles, Dan Costa and Bastian
Description/Aim	The aim of this novel e-instrumentation is to provide extensive content and metacognitive feedback to undergraduate students enrolled in the advanced compulsory statistics course. The unique Stats-mIQ (Statistical & Metacognitive Instrumentation Quizzes) has been used as a formative assessment tool during a large statistics course in the School of Psychology, USyd. The quizzes comprised of a set of formative assessment questions, available on the eLearning website, with extensive novel feedback in both statistics and metacognitive self-monitoring. These quizzes allowed students to develop the level of understanding that is essential for application and evaluation of basic research methods in psychology, including research design and data analysis and interpretation (Graduate Attribute 2). The novel design of the quizzes was based on the most recent advances in psychological and educational theory to foster a self-regulated approach to learning.
Benefits of Resource	Extensive and novel feedback, available to students at their own pace, aimed to provide a learning environment that enhances deep level understanding and integration of the material.
Issues for Consideration	Instructor needs to explain how to interpret and use metacognitive indices of performance. Instructions for students are also available within the program. The programming of Stats-mIQ was done by the USyd IT unit. We are happy to share the relevant codes, which may need to be adjusted by the users to suit their e-learning environment requirements.
Approximate Duration	There are 13 quizzes in total available for the Multiple Regression part, taking 5-10 minutes each. 10-13 more quizzes for the ANOVA part of the course are being currently integrated into this learning platform.
Primary Content/ Process Topic	Advanced Statistics (ANOVA with contrasts) and Multiple Regression/Path models.

Other Categories	Research methods or any course which would benefit from the use of the innovative feedback capacity of this instrumentation.
Intended student level <i>(e.g. Secondary, Undergraduate Introductory, Undergraduate 4th Yr/ Honours, Post-graduate)</i>	Undergraduate – any level
Type of Material <i>(e.g. classroom materials, assessment, lectures, teaching tips, articles, syllabi, simulated learning environments.)</i>	On-line e quizzes which could also be used for Practical/Tutorial examination.
Format of Material	e-learning material
Further Information Contact <i>(email only)</i>	sabinak@psych.usyd.edu.au
Review Requested <i>(Nb: A 'Yes' response to this category indicates that you would like feedback/comments on the materials via email.)</i>	No
Evaluative Data Included <i>(E.g. Student evaluation, comments etc.)</i>	A dramatic increase in student ratings on all questions on USE questionnaires, including questions about feedback and graduate attributes. Across several years, we have received consistently good student evaluation of the course, including the Teaching Citations for Excellence in Teaching Award (2009). The outcomes were also evaluated using rigorous research methodology. S Kleitman presented these results at national and international conferences, and a Round Table “Metacognition and learning technologies: Research case studies” during the Research Fest (USyd, 2010). A research paper based on these outcomes is in preparation. Interdisciplinary extension of this program has already commenced by integrating this methodology into teaching and research/teaching at other Schools of Psychology in Australia, and by a Computer Science and Software Engineering Department.