

**ZMATH 2016c.00524**

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**Using DEWIS and R for multi-staged statistics e-assessments.**

Teach. Math. Appl. 35, No. 1, 14-26 (2016).

Summary: We demonstrate how the DEWIS e-Assessment system may use embedded R code to facilitate the assessment of students' ability to perform involved statistical analyses. The R code has been written to emulate SPSS output and thus the statistical results for each bespoke data set can be generated efficiently and accurately using standard R routines. This enables students' answers, generated from their application of SPSS, to be marked and appropriate feedback supplied back to them automatically. Staging is used between different parts of the e-Assessment to replicate the natural stages of a complete statistical analysis. This allows students the freedom to work away from the e-Assessment; they may view the relevant stage an unlimited number of times prior to submitting their answers for that stage. The technical challenges of setting up the e-Assessment in this way are discussed as well as the rationale for adopting this pioneering approach.

*Classification:* D65 K75 U55

*Keywords:* e-assessment; statistics; hypothesis testing

doi:10.1093/teamat/hrv018