European Network for Business and Industrial Statistics

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Practice Makes Perfect –Perfect Exercises for Perfect Practice⋯

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The aim of introductory mathematics courses at university level is to provide students with the necessary tools for their studies. In terms of competence levels, the contents are still basic: the students should *know* and *understand* the underlying concepts, but mainly should be able to *apply* the relevant methods correctly in typical situations (even if they have not fully understood the concepts⋯).

In terms of constructive alignment, both teaching and final assessment should therefore assure that they reach this goal. This however requires training, so, the lecturers should supply a sufficient number of exercises they can try their skills on.

In the introductory statistics courses, we use online assessments on the learning management system Moodle since 2020, and the group of Applied Mathematics has ongoing projects on how to create digitally adjusted exam questions. In this line, we have started to employ the Moodle-plug-in STACK which uses the underlying computer algebra systems Maxima and provides a very flexible setting. The result: (almost) infinite exercises using randomized input. Even if you are not working with Moodle, the question types can serve as an inspiration for your own set-ups, e.g., using R interfaces.

We will present our statistics questions, but also give an outlook on other typical STACK applications such as interactive graphs or tests where students may actively use hints; and discuss the current status of sharing data bases.

The talk is complementing the presentations of Sonja Kuhnt and Jacqueline Asscher, all focussing on optimal (digital) learning and assessment.

Keywords

digital exams, training material

Classification

Mainly application

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