

Applying Test Score Equating Methods using R

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Equating aims to adjust test scores on different test forms so that the test scores can be used interchangeably (González & Wiberg, 2017). Equating has a central role in large testing programs and it constitutes an important step in the process of collecting, analyzing, and reporting test scores. Equating is important as it ensures a fair assessment regardless which time, place or background different test takers might have. This pre-conference workshop has two main goals. The first goal is to provide an introduction to equating. Through a number of examples and practical exercises, attendees will get both a conceptual and practical understanding of various equating methods conducted under different data collection designs. The R software will be used throughout the session with special focus on the packages; *equate*, *kequate*, and *SNSequate*. The second goal is to provide the necessary tools to be able to perform different equating methods in practice by using available R packages for equating. The training session follows the chapters in the book *Applying test equating methods using R* which has been written by the instructors and will be released in March 2017 by Springer.

Content: The training session will start by introducing traditional equating methods and different data collection designs and illustrates how they can be performed in the R packages *equate* and *SNSequate*. Next, the attendees will be guided through the five steps of kernel equating: i) presmoothing, ii) estimating score probabilities, iii) continuization, iv) equating and v) calculating the standard error of equating, using the R packages *kequate* and *SNSequate*. The attendees will then be introduced to item response theory equating and will receive practical guidance on how to perform these methods using R. The workshop will end with practical recommendations and examples when performing equating in order to conduct a fair assessment regardless of the time, place or the background of the test takers. This pre-conference workshop will provide the attendees with a broad knowledge of recent developments in equating as well as how they should be performed within the R environment. They will get a number of opportunities to familiarize themselves with the currently available equating R packages. Throughout the training session, examples and exercises will be provided and hands on examples will be encouraged to be conducted by the attendees. Attendees are expected to bring their own laptop with R installed together with the latest versions of the R packages *equate*, *kequate*, and *SNSequate*. Electronic training materials will be provided to the attendees.

Intended audience: Researchers, graduate students and practitioners and others with interest on how to conduct equating in practice. An introductory statistical background as well as experience in R is recommended but not required.

References

González, J. & Wiberg, M. (2017). *Applying test equating methods using R*. Springer: New York.