Comparative Judgement for Research and Practice: an Application of D-PAC

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This workshop is given by researchers from the D-PAC project (www.d-pac.be). D-PAC stands for the Digital Platform for the Assessment of Competences and uses Comparative Judgement (CJ). This four year project started in 2014 and is a partnership between the University of Antwerp, Ghent University, and imec, a R&D and innovation hub in Belgium. Besides developing the tool and optimizing its usability, the team is doing research on the validity, reliability, and efficiency of CJ, as well as on how it can facilitate feedback for both individuals and organizations.

Why AEA members should attend this workshop:

This workshop provides valuable insights for researchers and practitioners working with or planning to work with the method of comparative judgement.

Who this Workshop is for:

Researchers and practitioners interested in CJ research and assessment. Knowledge of R (or Jamovi) is not required, but some basic notions might be useful.

Overview:

Comparative Judgement (CJ) is an assessment method introduced by Pollitt (2012) and is based on Thurstone's Law of Comparative Judgement (Thurstone, 1927). Assessors receive pairs of students' work and judge which one is better concerning a competence under assessment. Based on these comparisons, performances can be ranked on a scale from low to high quality. Previous research has shown that comparative judgements results in reliable rank-

orders for a wide variety of competencies (McMahon & Jones, 2015) and for inter-board comparability studies (Bramley, 2007). In the last decade, CJ has been increasingly implemented in education and research. There is, however, considerable variation between CJ assessments, such as in the pair selection algorithm, and assessor expertise. This can have an impact on the minimum number of comparisons and assessors needed for a reliable and valid rank-order. To make the best choices for a successful implementation of CJ, both educators and researchers need a basic understanding of its theoretical principles and the techniques regarding the set-up and analyses. This workshop aims to fulfil this need. It is intended for researchers and practitioners who use, or intend to use, CJ in their research or assessment. By the end of this workshop the participants will be familiar with the basic principles and techniques behind CJ.

The workshop will exist of two parts: a theoretical and a hands-on part. In the two morning sessions participants will get to know CJ in an interactive way. We will present different algorithms for the selection of pairs and their impact on the (reliability of the) rank order. Further, we will present the broad applicability of CJ. In the D-PAC project (www.d-pac.be), for example, we have applied and tested CJ for the assessment of a wide range of competencies in all levels of education, in peer and teacher assessments, as well as in HR contexts such as for job selection. We have also applied CJ in the context of numerical cognition, audiology, and professional development. In these assessments we have experimented with different algorithms, different types of feedback, different numbers of assessors and comparisons, and differences in assessor expertise. Based upon these experiences, we will discuss the requirements for a reliable and valid CJ assessment. In small groups, participants will discuss the possibilities of applying CJ in their own research or assessment practice and formulate specific research questions.

The two afternoon sessions will be hands-on, in which participants will set up their own CJ study in the D-PAC tool. We will show the functionalities of D-PAC, using a worked example, after which the participants will conduct their own assessment. Afterwards, participants will analyse the data that is generated by the tool. We will focus on the meaning and interpretation of the Scale Separation Reliability and the misfit statistics. We will guide the participants through all the necessary steps of CJ data analysis in Jamovi (www.jamovi.org), a graphical user interface built on top of R. Knowledge of R is not required, but some basic notions might be useful.

Preparation for the workshop: Participants should bring their laptops with the latest version of R and Jamovi pre-installed. Internet connection will be required to distribute the necessary files.

Time	**Session**	**Presenter**
09.00	Coffee and registration	
09.30	Welcome & introductions Outline of the Workshop	All presenters
09.45	Comparative Judgment and underlying principles	
11.00	Break	
11.30	Requirements for a reliable and valid CJ assessment	
13.00	Lunch	
14.00	Hands-on: set-up of a CJ assessment and judging	
15.30	Break	
15.45	Hands-on: analyses and results	
16.30	Workshop close	