

# COST ACTION 15130 SAREP

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## Plenary speakers and abstracts

**Emma Marsden, University of York**, is senior lecturer of linguistics at the University of York. She is an internationally well-known researcher within Second Language Acquisition. She is also one of the directors of the IRIS repository which is an on-line collection of instruments, materials, stimuli, and data coding and analysis tools used for research into second language.

### Opening up the science in second language acquisition research

The open science movement is gaining momentum, pushing researchers in many disciplines to be more transparent with their methods, data and reporting practices (Wagner, 2010; Wicherts, Bakker & Molenaar, 2011; Piwowar & Vision, 2013). Driven in part by a social equality agenda, this movement is also driven by the conviction that open practice improves the quality, quantity and scope of research. In this talk, I present highlights from a series of initiatives in SLA research which aim to improve methodological transparency.

The IRIS repository ([iris-database.org](http://iris-database.org)) now holds over 2200 materials used to collect data for peer-reviewed published research (Marsden, Mackey & Plonsky 2015). I will describe its content and use, and demonstrate some of its materials and features, focussing on those useful for questions related to study abroad research. I will then illustrate the importance of working with infrastructure such as IRIS by drawing out key findings from three other projects.

First, I will provide data from methodological syntheses on two common data elicitation techniques: acceptability/grammaticality judgement tests ( $k = 380$ ; Plonsky et al, in progress) and self-paced reading tests ( $k = 70$ ; Marsden et al. under review). By focusing on their design features, reporting practices, and transparency, I will demonstrate how these influence rigour and replicability. Large 'special collections' of these elicitation techniques, now hosted on IRIS, will be highlighted.

Second, I will provide key findings of a synthesis of self-labelled replication in SLA ( $k = 67$  replications of 70 'original' studies) (Marsden et al., in progress), again demonstrating how increased methodological transparency is essential for improving the quality and scope of replications.

Finally, I will illustrate the benefits of multi-site replication, using open materials and protocols (Morgan-Short et al. <https://osf.io/7y8hu/>).

The open science movement is not without its critics (Osborne, 2013; Vincent & Wickham 2013), as well as its silent abstainers. However, these arguments relate almost exclusively to publication. In this talk I hope to demonstrate that there are very few, if any, valid arguments against increased transparency of methods.

**Joost van der Weijer, Lund University**, is associate professor of linguistics at Lund University. He is currently working as a methodologist and statistician at Lund University Humanities Lab where he conducts research and teaches on different aspects of statistical analyses in behavioural sciences.

### Statistical analysis in the language sciences

Within any field of research, the results of experimental studies are not always as anticipated. An effect of interest may, for instance, be not statistically significant, or it may be that significant effects are found at places where they are not expected to be. As a consequence, the results of the experiment are not transparent, and therefore become difficult to interpret, leaving the pre-experimental questions unanswered. In my presentation I will illustrate some pitfalls in experimental linguistic research with actual examples, and discuss whether and how these could have been avoided.