THEORETICAL AND METHODOLOGICAL FOUNDATIONS
OF MULTILEVEL RESEARCH

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WORKSHOP DESCRIPTION

The purpose of this workshop is to develop the theoretical/conceptual background and methodological/statistical skills required for conducting multilevel research in the areas of Organizational Behavior, Human Resource Management, and related fields (e.g., Strategy, Behavioral Marketing). Topic areas to be covered include: (1) multilevel construct and measurement development and aggregation, (2) basics of multilevel modeling, and (3) advanced topics in multilevel modeling (growth modeling, 3-level models, & multilevel moderated-mediation models). The workshop assumes participants have basic background in scientific principles, psychometrics (e.g., classical test theory, reliability & validity), and general linear model methods (e.g., ANOVA, regression).

Given the complex nature of the topics covered, the main focus will be on providing an overview and basic understanding of the topics, such that participants will gain the tools needed to continue learning more about the topics following (outside) the course. The workshop will consist of lectures, class discussions, and exercises. The lectures and discussions will provide the background and thorough description of each of the topics to be covered. The exercises will allow participants to learn how to actually conduct and interpret the multilevel analyses covered in the lectures and discussions.

There is no required textbook for this workshop. Instead, readings taken from a variety of journals and book chapters will be assigned. Some of the readings will be discussed more explicitly in class than others. Those readings that are relevant to course topics, but may not be discussed explicitly in class, are marked with *. Participants are encouraged to read the articles and chapters BEFORE our scheduled meetings, to get the most out of this workshop. Since the workshop meetings are scheduled very close together, I strongly encourage you to complete the reading ahead of time, before our first meeting.

Participants are also expected to have access to MPlus (Base Program and Multilevel Add-On; see http://www.statmodel.com/) as well as the R program for SPlus (see http://www.r-project.org/). We will use both programs during the workshop, for some overlapping as well as unique purposes and capabilities. If you cannot gain access to MPlus, you can still participate in this workshop, but will not be able to perform some of the analyses we will conduct.
TOPICS, READINGS, & EXERCISES

NOTE:
- All readings and materials are available in the workshop’s Dropbox folders;
- Sessions’ power point slides will be provided, via the workshop Dropbox folders, prior to the workshop.

1. July 12 (9:00-16:30): Multilevel framework & aggregation

Topics:
- Introduction to levels of analysis principles and concepts
- Nature and types of constructs across levels
- Measurement and validation of constructs across levels
- Overview of inter-rater agreement and reliability statistics
- Brief introduction to the R language in S-PLUS
- Exercise: Calculating aggregation statistics in R

Readings:


2. July 13 (9:00-16:30): Analyzing multilevel data in Random Coefficient Modeling (RCM)

Topics:
- Overview of random coefficient modeling (RCM)
- Analytical process in RCM
- Modeling same-level (nested) and cross-level effects
- Exercise: Multilevel analyses in R and MPlus

Readings:
*Bliese, P. D. & Hanges, P. J. (2004). Being too liberal and too conservative: The perils of treating grouped data as though they were independent. Organizational Research Methods, 7, 400-417.
3. **July 14 (9:00-16:30): Advanced topics in RCM**

***NOTE: We have several different topics we can cover on this last day, with some flexibility in terms of which ones we get into deeper, and which ones a bit less deeply. If you have preferences, we can discuss during the workshop.***

**Topics:**
- Within-person data analysis (e.g., ESM studies)
- Growth modeling in RCM
- 3-level analyses
- Moderated-mediation in multilevel models
- Data with complex nesting structures (e.g., multiple teams membership data)
- **Exercise:** Growth modeling analyses in R and MPlus
- **Exercise:** 3-level RCM analyses
- **Exercise:** Multilevel moderated mediation analyses

**Readings:**


*Chan, D. (1998). The conceptualization and analysis of change over time: An integrative approach incorporating longitudinal mean and covariance structures analysis (LMACS) and multiple indicator latent growth modeling (MLGM). *Organizational Research Methods, 1*, 421-483.*


