



eduLIFE Project

Workshop on

Multilevel Modeling

Organised by Prof. Hans-Peter Blossfeld

Keynote speaker: Prof. Tenko Raykov (Michigan State University)

16-17 May 2013

Seminar Room 2, Badia Fiesolana
European University Institute, Florence

Please register with Alina.Vlad@eui.eu

Workshop Outline

The workshop addresses issues from the social and political sciences field and is directed particularly at researchers working on the eduLIFE project but also to EUI researchers interested in topics related to multilevel modeling. The software Stata is used throughout, and in part data from the presidential elections in 2004 in the US. The following research questions will be covered:

1. Why do we need multilevel modeling (MLM)? Why are aggregation and disaggregation unsatisfactory?
2. The beginnings of MLM
 - why is our previous knowledge on regression analysis so useful?
 - centering of predictor variables.
3. The intra-class correlation coefficient – Do we really need a multilevel model?
4. How many levels? – Proportion of variance at the third-level and how to evaluate it.



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5. Robust modeling of lower-level variable relationships in the presence of clustering effects.
6. What are mixed models, what are they made of, and why are they useful?
7. A new perspective on random regression models – a general class of mixed/multilevel models of great utility.
 - restricted maximum likelihood (REML) estimation, random regression models,
 - multiple random slopes,
 - fixed effects, random effects, and total effects,
 - numerical issues and possible problems,
 - nested levels (higher-order nesting),
 - application on data from the US presidential election 2004.
8. Mixed models with discrete response variables – what can be done when the outcome is not continuous? why do we need another modeling approach?
 - random intercept model with discrete outcome,
 - random regression model with discrete response,
 - model choice with discrete outcome,
 - application on data from the US presidential election 2004.
9. Conclusion and outlook.

~Requirements for credits: submission of computer exercises~



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