

Latent Class Analysis

ICPSR University of Michigan, Ann Arbor

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Syllabus

0. Resources for this course.
1. Where does latent class analysis (LCA) come from? – LCA's roots in various scientific disciplines and clustering, and start-up examples.
2. What is a mixture of distributions? – Two mixture examples and the aims of LCA.
3. Basic statistical concepts of relevance to LCA and getting to know the software Mplus.
4. What is latent variable modeling (LVM), how is it related to LCA, and how is it relevant for the latter?
5. An important classification of latent variable models – LCA's connection to three other major applied statistical modeling frameworks in the social sciences, and how that connection is beneficial for empirical researchers.
6. Why traditional cluster analysis is limited and cannot in general accomplish the clustering aims, and why LCA does (much) better?
7. LCA as a model-based clustering methodology for the social sciences, and how to carry out LCA in empirical research – A generally applicable methodological strategy.
8. LCA applications in cross-sectional social science studies.
9. LCA applications in longitudinal research – growth mixture modeling.
10. Extensions, practical issues, and related current limitations of LCA in empirical social research.
11. Conclusion.