MGMT 872 Strategic HR Metrics

Instructor: Paul D. Bliese, Ph.D.
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Office: 410B
Office Hours: Monday and Wednesday 10:00-11:30 p.m. and by appointment. Note that setting up an appointment is the most reliable way to see me as meetings and other events often impinge upon regular office hours.
Class Room: Rm. #108
Class Hours: 1:00pm to 4:00pm Mondays: January 9 – April 24

Course Description:

A wide variety of data from organizations are non-independent in that observations at lower levels are clustered within higher-level entities. For instance, individual employees are typically members of departments within larger organizations. Similarly, longitudinal data collected over time results in a structure where repeated measures are nested within a larger entity (e.g., person, team, firm).

When observations are nested, the lower-level data is influenced by properties of the higher level structure. In other words, part of the variance in any response is explained by properties of the larger entity. This non-independence poses both challenges and opportunities for data analysis and interpretation. The purpose of this seminar is to explore ways to analyze complex multilevel and longitudinal data.

Each session of the class will be split between theory and application; we will read relevant literature, and explore the findings through analyses. The class will begin by introducing issues surrounding the construct validity of aggregate measures, aggregation bias, atomistic fallacy, and the ecological fallacy. We will explore these topics using literature from organizational behavior, organizational psychology, sociology, education, and epidemiology. The remainder of the class will center on statistical models that have been proposed to help draw inferences from multilevel data.

Optional Texts (not required):


Learning Objectives

Upon completing the course, you will:

1. Understand the theoretical and conceptual issues surrounding multilevel analyses and multilevel inference
2. Be able to estimate a wide variety of agreement indices in R
3. Be able to estimate and interpret 2-level mixed-effects models
4. Be able to estimate and interpret a variety of longitudinal variants of the growth model in R
5. Gain experience writing methods sections using mixed-effects models
6. Be able to present the results of a research study based upon mixed-effects analyses

Prerequisites

Students are expected to have a working knowledge of general linear models (regression and ANOVA) and to be reasonably skilled with using common statistical packages (SAS, SPSS, STATA). Students are not required to have any familiarity with R as this will be taught during the course.

Class Organization & Activities

The day-to-day class activities will vary, but these are some important regular elements of class:

- Procedures and class business: The very beginning of each class is set aside to cover any questions or issues with regard to the syllabus, process, deliverables, and expectations.
- Seminar Format: I will actively seek your help in making this class an engaging seminar. Please share your ideas, questions, and experiences during class.
- You should bring your laptop computer to class each meeting. We may not use the computer each day, but on many days we will use the computer. In addition, you may want to follow along when I do tasks in class.

Grading:

Projects and exercises will be due by the beginning of class. Grades will be based on the following criteria:

Class participation (10%)
Exercises (30%)
Weekly commentaries (20%)
Research Paper (30%)
Presentation of Research Paper (10%)
Final grades will be based on the scale below:

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<thead>
<tr>
<th>Percent</th>
<th>Grade</th>
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<tbody>
<tr>
<td>90-100%</td>
<td>A</td>
</tr>
<tr>
<td>87-89.99%</td>
<td>B+</td>
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<tr>
<td>80-86.99%</td>
<td>B</td>
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<tr>
<td>77-79.99%</td>
<td>C+</td>
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<tr>
<td>70-76.99%</td>
<td>C</td>
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<tr>
<td>67-69.99%</td>
<td>D+</td>
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<tr>
<td>60-66.99%</td>
<td>D</td>
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<tr>
<td>Less than 60%</td>
<td>F</td>
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Class participation (10%)

You will get the most out of the seminar if you are fully prepared to discuss the readings. Your participation grade will be based on the quality of your input (e.g., demonstrated grasp of the readings; ability to develop and present new ideas and insights; ability to respond to others’ ideas and input) and by the quantity of your input (i.e., participation – but not domination – in every class discussion). I reserve the right to call on you at any time about any reading.

In a typical week, I will generally assign 4 to 5 readings. I will assign a student to provide a summary of one of the readings. The summary should provide a brief overview of the reading. Your goal is to summarize the reading in 10 minutes (or less) – to refresh everyone’s memory of the reading.

Exercises (30%)

Throughout the course, I will assign exercises to be completed outside of class. These will always involve the analyses and interpretation of data, and will correspond to material that we have covered in class. I will grade these exercises. I will use these exercises in lieu of exams to check your progress in the class.

A note on the grading of the exercises – completed and generally error-free exercises will be given scores between 90 and 100. You should expect to get a string of high scores. The best way for the material to sink in is if you regularly work with data – the exercises are designed to help make sure you get regular exposure to R and data analyses.

Note that exercises are NOT equally weighted. There are two exercises (Exercise 10 and the final set of exercises on discontinuous growth models) that are considerably more complex and each of these accounts for 25% of the exercise grade. That is, together these two exercises account for 50% of the total exercise grade.

Weekly Commentaries (20%)
Each week, you must write a 2 page (double-spaced) commentary on the readings. In your commentary, discuss some or all of the following topics: Strengths and weaknesses of the article; what intrigued and interested you; how the readings fit with other readings for the week; links from the reading to topics in your field of interest (how might you and or others in your field use the work?); links to prior weeks of the class. Do be personal. Do be thoughtful. These will also be graded.

Research Paper (30%)

The completion of an empirical research paper will determine a large proportion of your grade. In the research paper, I will expect you to analyze a multilevel data set using appropriate analytic techniques. I will work closely to help you find a suitable dataset.

Presentation of research (10%)

The final part of your grade will be determined by the presentation of your research to the class. Your goal should be to provide an organized and clear presentation.

Academic Integrity

Academic integrity is expected in this class. Academic dishonesty will not be tolerated in any form, with its determination as set by the university honor code. The following examples are illustrative of conduct that violates the honor code: (a) giving or receiving unauthorized assistance, or attempting to give or receive such assistance, in connection with the performance of any academic work; (b) unauthorized use of materials or information of any type; (c) use of another person’s work or ideas without proper acknowledgement.

University procedures will be used to investigate any potential instances of academic dishonesty. Please visit the following website for more information on the university’s code of academic integrity: http://www.sc.edu/academicintegrity/honorcode.html

Attendance

I expect attendance at all class sessions. Because learning in this course occurs primarily through class lectures and demonstrations, you should make every effort to attend each class. There is no substitute for being present, prepared, and participating in the class discussion. While I recognize that at some point during the class session an absence may be unavoidable, and tradeoffs need to be made, absences necessarily limit your class contribution - and hence can influence your class contribution grade. I also expect everyone to be present and ready when the class starts. Being late is disruptive to the flow of the class, so I will consider tardiness as a variable potentially influencing your class contribution grade.

Late Assignments

Late assignments will incur, at minimum, a 10% grade reduction. I will also deduct 10% for each additional day the assignment is late.

Disability Policy
If you have a documented disability or other special needs and wish to discuss appropriate academic accommodations, please contact me as soon as possible but no later than the first day of class.

**Course Schedule:**
Although we will try to stick to the course schedule, I feel it’s important that we devote sufficient time to cover the material to facilitate understanding. Therefore, I’ve designed some flexibility into the course schedule, and schedule dates are tentative. Based on your input, we may also add/drop readings as the class evolves (you’ll receive notice of this in advance); however, the sequence of topics is unlikely to change.

**Session 1. January 9:**  Introduction to Multilevel models and to R

Exercises 1 and 2 Assigned: Intro to R and Import Data

**SKIM:**

**Session 2. January 23:**  Conceptual Foundations


**Session 3. January 30: Composition Models and ICCs**

Exercise 3 Assigned: Estimating ICC(1) and ICC(2)


**Session 4. February 6: Aggregation Tests**

Exercise 4 Assigned: Estimating and Testing Within-group agreement


**Session 5. February 13: OLS Contextual Models and Covariance Theorem (Guest Instructor – Dr. Mark Maltarich)**

Exercise 5 Assigned: Data manipulation functions for multilevel models and estimating contextual models in OLS


Exercise 6 assigned: Examining the DV in MRCM models


Session 7. February 27: Two-Level Mixed Effect Model Examples and Variance Explained

Exercise 7 Assigned: Adding Level-1 and Level-2 Main Effect Predictors


SPRING BREAK (March 6)

Session 8. March 13: Cross-Level Interactions and Centering

Exercise 8 Assigned: Adding a cross-level interaction


**Session 9. March 20: Review/Discussion Day**
- No Exercise Assigned
- Review materials covered to date
- Discuss project ideas for final paper with individual students

**Session 10. March 27: Growth Modeling Introduction**

Exercise 9: Transforming data from multivariate to univariate form


**Session 11. April 3: Growth Modeling Examples and Empirical Bayes**

Exercise 10: Conducting Growth Modeling (INVOLVED EXERCISE THAT ACCOUNTS FOR 25% OF YOUR EXERCISE GRADE)


Session 12. April 10: Discontinuous Growth Models: Set up data (discontinuous growth model powerpoints)

Exercise 1 and 2 (Advanced Discontinuous Growth Exercises)


Session 13. April 17: Discontinuous Growth Models: Interpreting Results (discontinuous growth model powerpoints)

Exercise 3, 4 and 5 (Advanced Discontinuous Growth Exercises). INVOLVED EXERCISE THAT ACCOUNTS FOR 25% OF YOUR EXERCISE GRADE.


Session 14. April 24: Student Project Presentations

Session 15. April 28: Student Project Presentations (Final Exam Time)