



UNIVERSIDADE DE BRASÍLIA (UNB)
FACULDADE DE ECONOMIA, ADMINISTRAÇÃO E CONTABILIDADE (FACE)
PROGRAMA DE PÓS-GRADUAÇÃO EM ADMINISTRAÇÃO (PPGA)

Course: Measurement in management science: an applied approach, XXXXX, XX , XX
“créditos”.

School semester: 2020 1º semester

Professor: Dra. Amalia Raquel Pérez

Course program:

Measurement theory and applications for social sciences. Problems in social science measurement. Steps in scale development. Writing non-cognitive items (e.g. attitudes). Reliability and validity. Methods of assessing reliability. Forms of validity evidence. Exploratory Factor Analysis. Confirmatory Factor Analysis. Cross-cultural scale adaptation: adopting or adapting existing instruments. Assessing and testing cross-cultural measurement equivalence. Examples and applications.

Thematic axis: Methodology

Learning outcomes:

At the end of this course, students will be able to:

1. Describe the main measurement theory
2. Discuss the advantages and disadvantages of different data source for empirical research
3. Adapt existing instruments
4. Apply R programming commands to manipulate and analyse data and interpret R output
5. Create their own empirical analyses on one social issue, applying their learning about relevant data.

Syllabus:

The range of subjects across the social sciences that are measured with quantitative data is very broad and the content of the course will need to be selective. The course will, in particular, cover topics relevant to core dimensions of measurement theory and applied to the students' subject. Although, for at least one of the topics of leadership will be taught in order to apply and explain the content. The content of the module will also vary with students needs. A major feature of this module is the exposure to R statistics.

The class will be synchronous through google meet. At the meetings, the idea is to review the main topics of the text (the professor will provide it using power point), discuss questions about the text, and applied questions. It means that it is expected students read the proposed text first.

The quantitative analyses (EFA, CFA, invariance etc) will be done in class and by the student. In other words, the quantitative analyses are synchronous and asynchronous. All the analyses will be first conduct with the professor, in class. After the class, it is expected that the student conducts the same analyses in order to retain it.

The method and results report will be done by the student (asynchronous activity) and posted in the Moodle.



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Moodle access: www.aprender3.unb.br

Title: Management measurement: an applied approach – Turma A

Inscription code:

Classes at the following link: <https://meet.google.com/wdt-xthy-ifo>

Teaching and learning methods

Teaching and learning process is through a mixture of lectures, text discussion and computer workshops using the statistical software R. In the computer workshops students collect and analyse data relating to the key topics discussed and applied (if it is the case) to their subject.

Assessment:

Direct participation on the topics – 20 points

Present the theoretical proposition – 20 points

Present the method and results – 20 points

Write an issue with aim, hypothesis, method and results – 40 points (APA style)

Schedule

Meet	Content	Activity
1	Presentation	Each student will present: Name Theme of their work What they are expecting and need What are their background in terms of measurement, analyses, and R.
2	Reis and Gosling	How to choose a method
3	Campbell (2013) Boon, Den Hartog and Lepak (2019) Price and Mueller (1986)	How to choose a measure
4	Presentation – theoretical proposition Presentation of collective activity	
5	Weaver and Schwarz (2008)	Steps in scale development, writing items
6	Hinkin (1998) Hinkin (1997)	Steps in scale development, writing items
7	Colton & Covert (2007) chapter 4 Crawford & Kelder (2019)	EFA, CFA, Reliability and validity
8	Revelle (2018)	R application Excel and others
9	McNeish (2018)	R application Excel and others
10	Tran (2009) – Chapter 3 and 6	Adopting and adapting existing instruments



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11	Fischer and Karl (2019)	Measurement invariance
12	Hirschfeld and Von Brachel (2014)	R application
13	Presentation – method and results	
14	Delivery of the work and assessment of the course	Issue wrote
15	Closeness and results	Coffee

References

All the texts will be provided by the teacher in the Moodle platform

Boon, C. T., Den Hartog, D. N., & Lepak, D. P. (2019). A Systematic Review of Human Resource Management Systems and Their Measurement. *Journal of Management*, 45(6), 2498–2537. <https://doi.org/10.1177/0149206318818718>

Campbell, J. P. (2013). Assessment in industrial and organizational psychology: An overview. *APA Handbook of Testing and Assessment in Psychology, Vol. 1: Test Theory and Testing and Assessment in Industrial and Organizational Psychology.*, 1, 355–395. <https://doi.org/10.1037/14047-022>

Crawford, J. A., & Kelder, J. A. (2019). Do we measure leadership effectively? Articulating and evaluating scale development psychometrics for best practice. *Leadership Quarterly*, 30(1), 133–144. <https://doi.org/10.1016/j.leaqua.2018.07.001>

Colton, D., & Covert, R. W. (2007). *Designing and constructing instruments for social research and evaluation*. John Wiley & Sons.

Fischer, R., & Karl, J. A. (2019). A Primer to (Cross-Cultural) Multi-Group Invariance Testing Possibilities in R. *Frontiers in Psychology*, 10. <https://doi.org/10.3389/fpsyg.2019.01507>

Hirschfeld, G., & Von Brachel, R. (2014). Multiple-Group confirmatory factor analysis in R – A tutorial in measurement invariance with continuous and ordinal. *Practical Assessment, Research & Evaluation*, 19(7), 1–11.

Hinkin, T. R., Tracey, J. B., & Enz, C. A. (1997). Scale construction: Developing reliable and valid measurement instruments. *Journal of Hospitality & Tourism Research*, 21(1), 100–120. <https://doi.org/10.1177/109634809702100108>

Hinkin, T. R. (1998). A brief tutorial on the development of measures for use in survey questionnaires. In *Organizational Research Methods* (Vol. 1, Issue 1, pp. 104–121). <https://doi.org/10.1177/109442819800100106>

McNeish, D. (2018). Thanks coefficient alpha, we'll take it from here. *Psychological Methods*, 23(3), 412–433. <https://doi.org/10.1037/met0000144>

Price, J. L., & Mueller, C. W. (1986). Handbook of Organizational Measurement. *International Journal of Manpower*, 18(4), 305–558. <https://doi.org/10.1108/01437729710182260>

Reis, H. T., & Gosling, S. D. (2010). Social psychology methods outside the laboratory. In S. T. Fiske, D. T. Gilbert, & G. Lindzey (Eds.), *Handbook of Social Psychology* (5th ed., pp. 82–114). Wiley.



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Revelle, W. (2018). *Psych. R Package*, 1–358. <https://doi.org/10.1109/TEM.2010.2048913>

Tran, T. V. (2009). *Developing cross-cultural measurement*. Oxford University Press.
<https://doi.org/10.1017/CBO9781107415324.004>

Weaver, K., & Schwarz, N. (2008). Self-reports in consumer research. In C. P. Haugtvedt, P. M. Herr, & F. R. Kardes (Eds.), *Handbook of Consumer Psychology* (pp. 1081–1102). Lawrence Erlbaum Associates.