



INSTITUTIONEN FÖR PEDAGOGIK OCH SPECIALPEDAGOGIK

QRM1803, Mätlära: Teori och tillämpning i utbildningsvetenskaplig forskning, 7,5 högskolepoäng

Measurement: Theory and applications in educational research, 7.5 credits

Forskarnivå / Third-cycle level

Litteraturlista för QRM1803

Litteraturlistan är fastställd av Institutionen för pedagogik och specialpedagogik 2025-02-11, att gälla från och med vårterminen 2025.

Se litteraturlistan på nästa sida.



DEPARTMENT OF EDUCATION AND SPECIAL EDUCATION

QRM1803, Measurement: Theory and applications in educational research, 7.5 credits
QRM1803, Mätlära: Teori och tillämpning i utbildningsvetenskaplig forskning, 7,5
högskolepoäng

Third Cycle/ Forskarnivå

The literature list is confirmed by the Department of Education and Special Education at 2018-06-26, revised 20190930, 20211210, 20221109, 20231210 to be valid from 2025-01-13.

Literature

Hambleton, R. K., Swaminathan, H., & Rogers, H. J. (1991). *Fundamentals of item response theory. Measurement Methods for the Social Science: Vol. 2.* SAGE Publications, Inc. (Selected chapters; pdf will be provided)

Kline, T. (2005). *Psychological testing: A practical approach to design and evaluation.* SAGE Publications, Inc. <https://methods.sagepub.com/book/psychological-testing>
<https://doi.org/10.4135/9781483385693> (Selected chapters; online access at GU library)

Koretz, D. (2008). *Measuring up: What educational testing really tells us.* Harvard University Press. (Online access at GU library)

Wedman, Jonathan, (2017). Reasons for Gender-Related Differential Item Functioning in a College Admissions Test. *Scandinavian Journal of Educational Research*, (2018), VOL. 62, NO. 6, 959–970 <https://doi.org/10.1080/00313831.2017.1402365>

Wu, Margaret, Hak Ping Tam, and Tsung-Hau Jen. 2016. *Educational Measurement for Applied Researchers: Theory into Practice.* Springer Singapore.
<https://doi.org/10.1007/978-981-10-3302-5> (Selected chapters)

+ articles/texts of ca 150 pages

Software

- IBM SPSS - Statistical package for the social sciences, version 20 or later. Most universities and colleges in Sweden offer SPSS to employees and students, either as a site-license or limited volume license
- R – can be downloaded for free from <https://www.r-project.org/>
- R Studio can be downloaded for free from <https://rstudio.cloud/>

- RUMM2030 +, Rasch Measurement Tools for Research and Education.
<https://www.rummlab.com.au/>
Participants will be offered a free of charge trial version, distributed at the course.

Extra readings

- Andrich, D., & Marais, I. (2019). *A course in Rasch measurement theory*. Springer.
<https://link-springer-com.ezproxy.ub.gu.se/book/10.1007/978-981-13-7496-8> (Online access at GU library)
- American Educational Research Association, American Psychological Association, & National Council on Measurement in Education (2014). *Standards for educational and psychological testing*. Washington, DC: AERA.
<https://www.testingstandards.net/open-access-files.html>
- Bergh, D. (2015). Chi-Squared test of fit and sample size—A comparison between a random sample approach and a Chi-square value adjustment method. *Journal of Applied Measurement*, 16(2), 204–217.
- Boone W. J. (2016). Rasch Analysis for Instrument Development: Why, When, and How?. *CBE life sciences education*, 15(4), rm4. <https://doi.org/10.1187/cbe.16-04-0148>
- Debelak, R., Strobl, C., & Zeigenfuse, M. D. (2022). *An introduction to the Rasch model with examples in R*. Chapman and Hall/CRC. <https://doi.org/10.1201/9781315200620> (Selected chapters; online access at GU library)
- Embretson, S. E., & Reise, S. P. (2000). *Item response theory for psychologists*. Mahwah, N.J. L. Erlbaum Associates. (Online access at GU library)
- Hambleton, R. K., & Jones, R. W. (1993). Comparison of classical test theory and item response theory and their applications to test development. *Educational Measurement: Issues and Practice*, 12(3), 38–47. <https://doi.org/10.1111/j.1745-3992.1993.tb00543.x>
- Mair, P. (2018). *Modern Psychometrics with R. Use R!* Springer International Publishing.
<https://doi.org/10.1007/978-3-319-93177-7>
- Majoros, E (2023). Linking the first- and second-phase IEA studies on mathematics and science. *Large-scale Assessments in Education*, 11(14). <https://doi.org/10.1186/s40536-023-00162-y>
- Majoros, E (2023). Linking the first- and second-phase IEA studies on mathematics and science. *Large-scale Assessments in Education*, 11(14).
<https://doi.org/10.1186/s40536-023-00162-y>
- Martinkova, P., & Hladka, A. (2023). *Computational Aspects of Psychometric Methods* (First ed., Vol. 1, Chapman & Hall/CRC Statistics in the Social and Behavioral Sciences). Milton: CRC Press. (Selected chapters) (Online access at GU library)
- Pedhazur, E. J., & Pedhazur Schmelkin, L. (1991). *Measurement, design, and analysis: An integrated approach*. Lawrence Erlbaum Associates.

- Rosén, M. (2001). Gender differences in reading performance on documents across countries. *Reading and Writing*, 14(1), 1–38. <https://doi.org/10.1023/A:1007995107442>
- Wiberg, M. (2004). *Classical test theory vs. Item response theory: An evaluation of the theory test in the Swedish driving-license test*. Can be downloaded through this link: https://pdfs.semanticscholar.org/9c50/be14cdab4eab719251871fa5c4f61e5d7808.pdf?_ga=2.266220039.929507363.1571824150-459876704.1571824150 (Links to an external site.)