

ReadMeFirst

Bond, T.G., Yan, Z., & Heene, M. (2020) *Applying the Rasch Model* (4th ed.)

The Routledge support site for this book is:

<https://www.routledge.com/9780367141424>

The dedicated support site for this book is:

[www.winsteps.com/ARM/](http://www.winsteps.com/ARM/)

This information concerns the software and files to support your reading of *Applying the Rasch Model* (4th ed.) Please follow the instructions below and in the software downloads.

**The book website provides downloads for:**

Free ARMSteps Rasch analysis software, including many-facets Rasch analysis;

WINSTEPS software manual;

FACETS software manual;

(English language tutorials and data files are pre-loaded in ARMSteps.

Data files used in the ARM (4th ed.) examples.

Excel spreadsheet for testing invariance of estimates. (Invariance.xls)

The ARMSteps Rasch analysis software is a full size, working version of WINSTEPS, especially designed by Mike Linacre to accompany ARM (4th ed.) WINSTEPS contains an absolutely comprehensive set of input, output and diagnostic features. I asked Mike to grey-out those functions I thought to be excess to the needs of readers of our book. You can do many complete analyses with ARMSteps. When you are ready to move on to all the bells and whistles of the latest WINSTEPS version, go to: [www.winsteps.com](http://www.winsteps.com)

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ARMSteps Installation

To install the ARMSteps Rasch analysis software on your computer:

Download the zipped file onto your computer;

Double click on the ARMSteps icon;

Follow the installation instructions.

The first time you run ARMSteps, it will check your computer for the necessary support software, i.e., Microsoft Excel and Acrobat pdf Reader.

ARMSteps is already fully loaded with specially prepared tutorials using the Bond & Fox data files. Those data files are already loaded into the ARMSteps software.

There are a number of ways to go through the ARMSteps tutorials; they match the chapters in ARM4.

ARMSteps

ARMChapter4.pdf gets serious about using ARMSteps on the BLOT data.

ARMChapter5.pdf and ARMChapter5~PRTIII.pdf use a number of advanced techniques to test for invariance.

ARMChapter6.pdf introduces the RSM to analyze IASQ Likert-style data.

ARMChapter7.pdf uses the PCM to analyze the Piagetian interview data.

ARMFacets

ARMChapter8.pdf is the ARMFacets tutorial for the Guilford data.

I strongly suggest that you follow the following graded sequence of tutorial exercises.

**Try these in order as you finish the appropriate chapter:**

ARMChapter4.pdf - the BLOT data.

ARMChapter6.pdf - IASQ Likert data.

ARMChapter7.pdf - Piagetian interview data.

**You have control of the main data analysis features? O.K. Try this:**

ARMChapter5.pdf - advanced techniques to test for invariance.

**You should easily handle the whims of a many-facets analysis, now:**

ARMChapter8.pdf is the ARMFacets tutorial for the Guilford data.

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Facets Analysis

The Chapter 8 analysis is a many-facets Rasch analysis of the original Guilford (1954) data of ratings of junior scientists. Mike Linacre has provided a prepared copy of his Facets software for your use. It is also pre-loaded with the Chapter 8 tutorial and the Guilford data file. Just click on the ARMFacets label at the right of the pull down menus.

The free copy of ARMFacets is already fully loaded with a specially prepared tutorial using the Guilford data file. That data file is already loaded into the software. A second facets data file, essayschap8.txt contains data and control files for a Facets analysis of judged performance data for 50 young ESL students on their three written essays, as judged by their four (ESL) teachers. You can follow the principles from the tutorial guide for Chapter 8 to run your own independent analyses of the new file.

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Excel spreadsheet for testing invariance of estimates. (Invariance.xls)

The original version of this XL spreadsheet was designed by colleague Peter Congdon. It provides a plot of estimates (items or persons) A v B and uses the A errors and B errors to construct 95% confidence bands for testing invariance.

Spreadsheets include one version for common item linking and another for common person linking (see Bond, Yan & Heene, 2020, Chapter 5). Please look at the models carefully, before cutting and pasting your own data – it does require understanding and some care.

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Data files used in the ARM4 examples.

Just the bare data files – no control lines, nothing. You can start from scratch just as we did...you work it out.

Bond87.txt Chapter 4 BLOT 5-39 (and for Chapter 5); Chapter 4 PRTIII 41-53

Cain.txt Chapter 6 Going Further CAIN 3-38

Chap7.txt Chapter 7 Piagetian Interview 17-37

We will add more data files from time to time.

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Useful web links:

The dedicated support site for this book is: [www.winsteps.com/ARM/](http://www.winsteps.com/ARM/)

To buy the full WINSTEPS version, go to: [www.winsteps.com](http://www.winsteps.com) .

The *Journal of Applied Measurement* - most authoritative journal for Rasch research.

<http://www.jampress.org/>

The complete set of the earlier Journal of Outcome Measurement , also founded by Richard Smith, is now available for free download as PDFs on that site.

*Rasch Measurement Transactions* - research notes and reviews. Publication of the Rasch Measurement SIG, AERA. <http://www.rasch.org/rmt/index.htm>

Rasch Measurement Special Interest Group website: [www.raschsig.org](http://www.raschsig.org)