IDB Analyzer on R coming soon...

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Introduction

- IEA’s IDB Analyzer:
  - Combines and analyzes data from large-scale assessments
  - Works on SPSS and SAS
- For several years: desire of IEA community for an option to use R with the IDB Analyzer
- We are happy to announce that we will meet this goal in 2021!
What is special about R?

- Open-source statistical software
- Rapid implementation of new features/methods
- Produces publishable graphs
- Variety of Graphical User Interfaces (GUIs) for maximal customization
- No-costs

Primary reasons for request of R integration with the IDB Analyzer
Challenges of R

• Development of R integration with the IDB Analyzer came with additional challenges compared to integration with SPSS and SAS.
• R relies on community and improves its base functionality with packages that users develop for specific purposes.
• IDB Analyzer users will need to download some of these packages to work with R version.
• R has a steeper learning curve compared to SPSS and SAS and does not have a single source for help when issues arise.
What distinguishes our R software from other R packages on ILSAs?

• Monitoring and maintenance by IEA Hamburg guarantees...
  – Timely inclusion of new studies and new methodological developments.
  – Reliable results.
  – Software keeps working with data structure of several studies that get more complex every cycle.

• Its integration with the familiar IDB Analyzer user interface enables a user-friendly experience for persons not knowledgeable about R.
  – Workshops for basic use of R will be provided.

• IDB Analyzer on R produces Excel and html output mirroring the output of the SPSS and SAS version of the IDB Analyzer.
### Check Analysis Variables

#### Unweighted Analysis Statistics

**Unweighted Descriptive Statistics**

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<th>Minimum</th>
<th>Maximum</th>
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What has been implemented?

• We integrated our design with pop-up windows to allow the user to easily load needed updates before running our R programming scripts.

• We ensure that experience using the IEA IDB Analyzer with R will be much the same as using it with SPSS and SAS.

• The Alpha release will include the following functions:
  – It will **merge** data and translate datasets from SPSS to R format with **convert** module
  – It will conduct several descriptive analyses:
    ▪ Percentages and means
    ▪ Percentages only
    ▪ Benchmarks
    ▪ Percentiles
    ▪ Linear regression
    ▪ Significance testing

• We recommend to use R Studio, which is a free interface software and makes the use of R easier.
When and how it will be released?

- The first release is planned to coincide with the release of the IEA IDB Analyzer version 5 in late November.
- Complete functionality including correlations and logistic regression should come in the first quarter of 2022 with the Beta release.
Thank you!

Questions?
Feedback?