Introduction to Mplus

MM4DBER Training Team

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Mixture Modeling for Discipline Based Education Researchers (MM4DBER) is an NSF funded training grant to support STEM Education scholars in integrating mixture modeling into their research.

- Please visit our website to learn more and apply for the year-long fellowship.
- Follow us on Twitter!

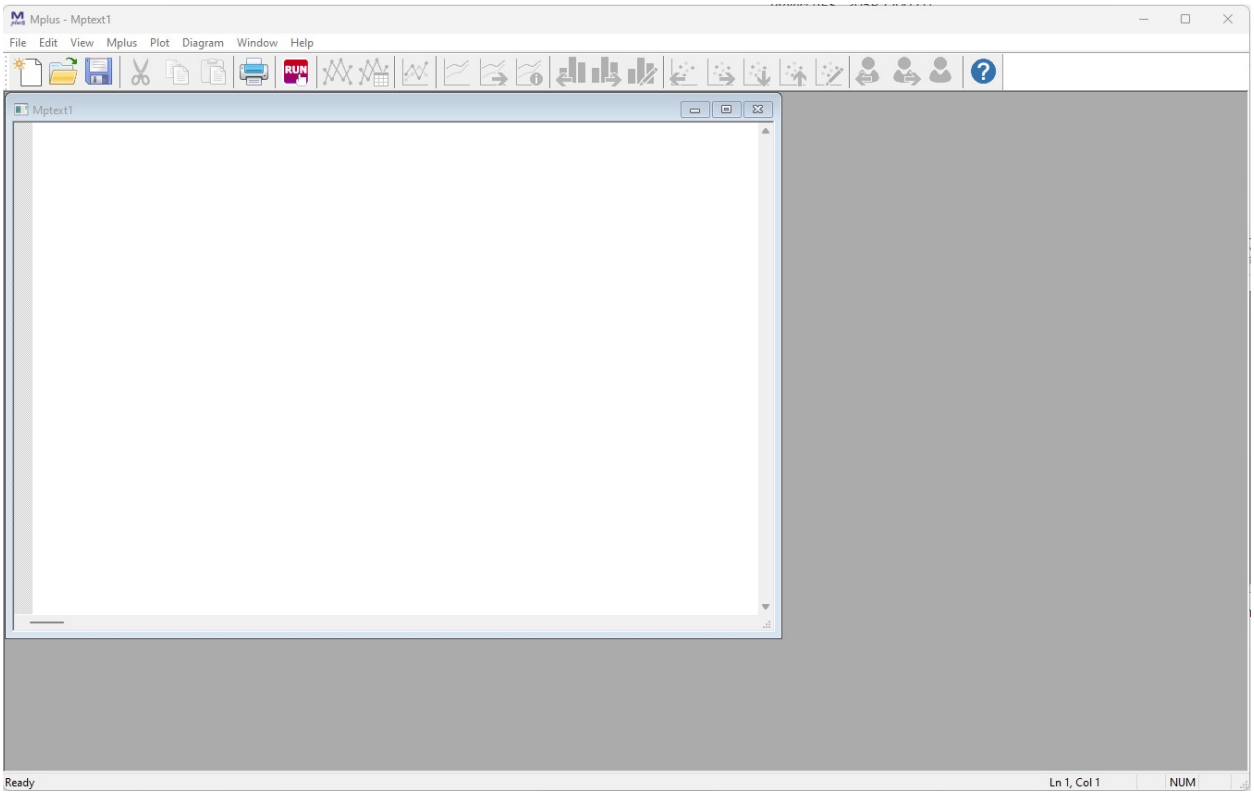
Visit our GitHub account to download the materials needed for this walkthrough.

Introduction to `Mplus`

Exercise: Walk through how to run basic descriptive statistics using the Mplus program.

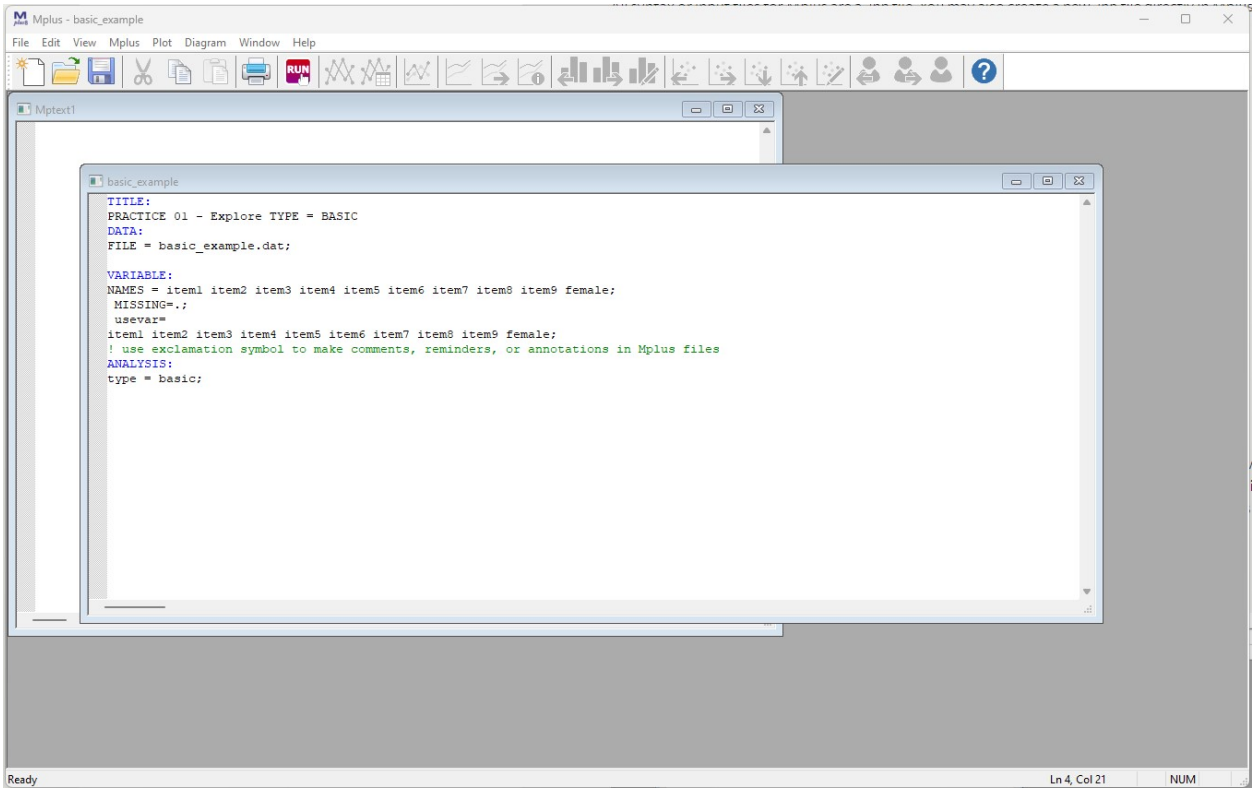
Learning objective: To understand how Mplus syntax works and, in preparation for future exercises, be able to differentiate `R` from `Mplus` syntax.

Step 1: Open Mplus



Mplus interface: Even though we will **NOT** be working directly in Mplus, it is good to get an idea of how Mplus works.

Step 2: Open Mplus input file located in the project folder



- Open the file titled `basic_example.inp` located in the `mplus_files` folder in Mplus.
- All syntax or input files for Mplus are a *.inp* file.
- You may also create a new *.inp* file directly in Mplus and populate the syntax there.
- For now, we can use one that is already complete.

Basic outline of an Mplus *.inp* file:

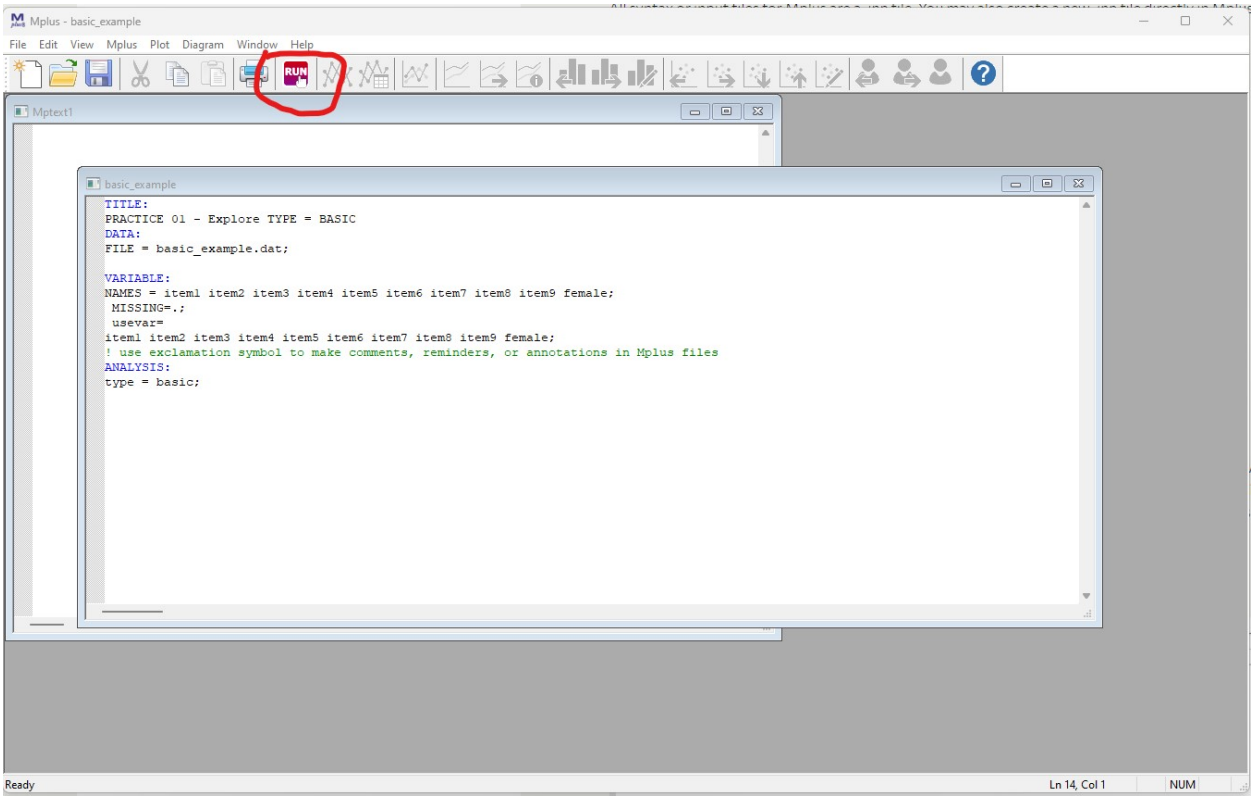
- **TITLE:** Title of document goes here
- **DATA:** Data file name (must be in the same folder as the *.inp*)
- **VARIABLE:**
  - **NAMES =** Names of each variable in order of each column (separated by spaces)
  - **MISSING** = What the missing data is labeled as (e.g., 999)
  - **USEVAR =** Names of the variable used in the analysis
- **ANALYSIS:**
  - **TYPE =** This line of sytax will change based on model type. Here we are running `type = basic` which will provide descriptive statistics for variables specified in the `USEVAR =` statement.

NOTE: Please view the data file that is provided in this walkthrough (`basic_example.dat`). Mplus works with .dat files to run analyses.

The data file (`.dat`) must also be formatted in certain way in order for Mplus to read it (i.e., no variable names or strings, only numbers).

For more information on Mplus commands, see here.

Step 3: Click Run



This will run our "type=basic" analysis which will provide us an *.out* file that contains variables descriptive statistics of our variables.

For information on the `type=basic` output, see here.

Mplus will save this *.out* file in the folder that dataset is located (in our case `part1_mplus`. All *.out* and *.inp* files can be open as a text file if you want to access them off without Mplus.

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