

Alexander Strobel
Christoph Scheffel

Chair of Differential and Personality Psychology
Technische Universität Dresden

Reproducible Analyses Practice

Open Science Workshop – Part II

OUTLINE

1. The Basics (20 min)

Learn the basics by working through the file `RM_01_GettingStarted.rmd`

2. Feedback (10 min)

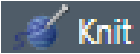
Obstacles when working with RMarkdown

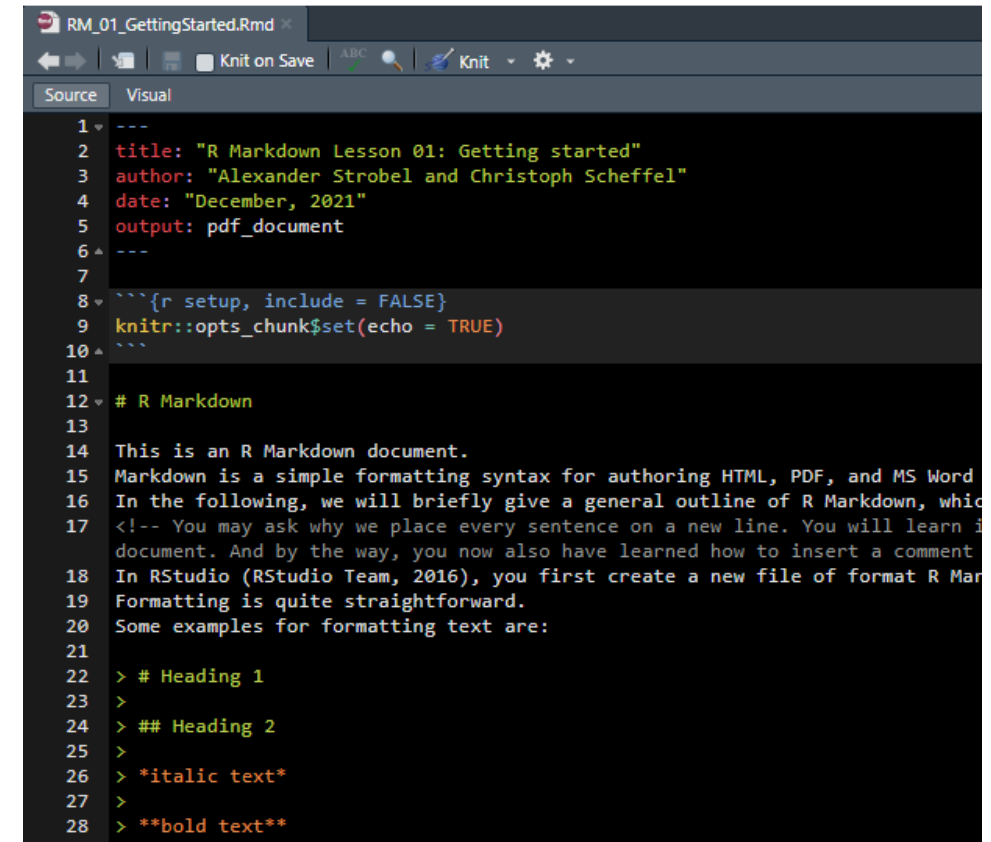
3. Work on your own manuscript (60 min)

PRACTICE – PART 1

THE BASICS – 20 MIN

Learn the basics by working through the file
RM_01_GettingStarted.rmd!

- open the file RM_01_GettingStarted.Rmd
- Work through the file locally on your computer. Also see how the file is displayed as a PDF document when you click on *knit* 
- Get together in groups of 2 - one person who already has experience using R and RMarkdown and one person who is just getting started with the software.



```
RM_01_GettingStarted.Rmd
Knit on Save
Knit

Source Visual
1 ---
2 title: "R Markdown Lesson 01: Getting started"
3 author: "Alexander Strobel and Christoph Scheffel"
4 date: "December, 2021"
5 output: pdf_document
6 ---
7
8 ```{r setup, include = FALSE}
9 knitr::opts_chunk$set(echo = TRUE)
10 ```
11
12 # R Markdown
13
14 This is an R Markdown document.
15 Markdown is a simple formatting syntax for authoring HTML, PDF, and MS Word
16 In the following, we will briefly give a general outline of R Markdown, which
17 <!-- You may ask why we place every sentence on a new line. You will learn in
18 document. And by the way, you now also have learned how to insert a comment.
19 In RStudio (RStudio Team, 2016), you first create a new file of format R Markdown
20 Formatting is quite straightforward.
21 Some examples for formatting text are:
22
23 > # Heading 1
24 > ## Heading 2
25 >
26 > *italic text*
27 >
28 > **bold text**
29 >
```

PRACTICE – PART 1

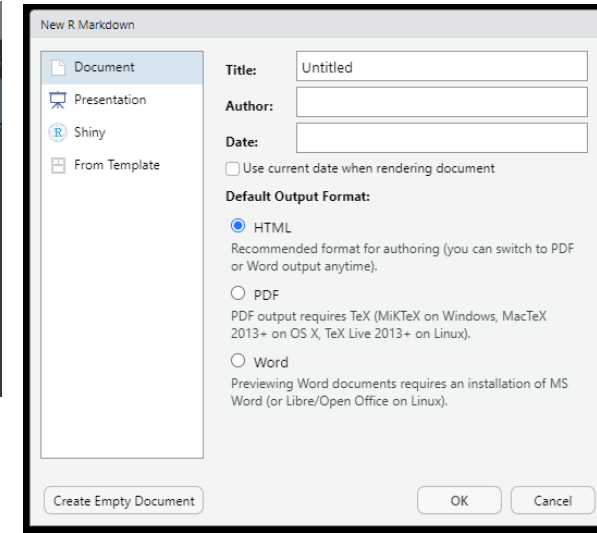
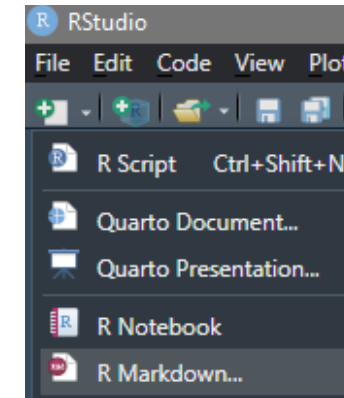
FEEDBACK – 10 MIN

PRACTICE – PART 1

OWN MANUSCRIPT – 60 MIN

Create a method section of your own manuscript!

- Open the manuscript and data sheet you brought with you
- Create a new, empty RMarkdown File



- Start by creating a code chunk for the setup
 - Install all relevant packages you need to import your data (e.g., *readxl* to import Excel files in R)
 - Import your data sheet in R

```
1 ---
2 title: "Method"
3 output: html_document
4 ---
5
6 ```{r setup, include=FALSE}
7 knitr::opts_chunk$set(echo = TRUE)
8
9 library(readxl)
10
11 data_ESER <- readxl::read_xlsx("data_all_ESER.xlsx")
12
13 ```
```

PRACTICE – PART 1

OWN MANUSCRIPT – 60 MIN

Create a method section of your own manuscript!

- Create a second code chunk to calculate relevant variables for the method part (e.g., mean and standard deviation of age)
- Consider also the formatting of these variables!
- Copy the existing text from the manuscript and paste it into the method section
- Remove all numbers (for example, number of subjects) and replace them with the appropriate variables
- Modify your dataframe: Delete a few participants in the first code chunk ("setup"). Knit the document again and see what happens

PRACTICE – PART 1

ADDITIONAL TASK

Start to write your results section!

- Create a new R chunk
- Calculate a simple linear model or ANOVA with the data you imported
- Report your results in a short paragraph

- Check, whether the *papaja-Package* has been installed and loaded correctly
- take a look at the function *apa_print()*
 - What arguments and values can be passed to this function?
 - Reports the results of the model calculated above using the function!

OUTLOOK

Preparing APA Journal Articles

papaja - Package

Workshop on papaja by Frederik Aust:

slides and video online:

<https://leibniz-psychology.org/ptos/r-markdown-papaja/>

