Through the eyes of the teacher

# Seed for random number generation  
set.seed(42)  
knitr::opts\_chunk$set(cache.extra = knitr::rand\_seed)

# 1 Packages

#install.packages("needs")  
  
# suppress "summarize" info.   
# if this line is ommitted, each table using the summarize function will be accompanied with a warning from the console  
options(dplyr.summarise.inform = FALSE)  
  
library(needs)  
  
needs(tidyverse,  
 lubridate,  
 viridis,  
 grid,  
 gridExtra,  
 cowplot,  
 readxl,  
 ARTofR)

# 2 Methods

We report how we determined our sample size, all data exclusions (if any), all manipulations, and all measures in the study.

## 2.1 Participants

Table 2.1:

*Demographic Information and Teaching Experience*

| Group | N | Male | M Age | Min Age | Max Age | SD Age | M Exp. | Min Exp. | Max Exp. | SD Exp. |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Expert | 12 | 5.00 | 45.17 | 27.00 | 59.00 | 11.26 | 17.83 | 2.00 | 37.00 | 14.02 |
| Novice | 22 | 8.00 | 23.32 | 20.00 | 27.00 | 1.67 | 0.00 | 0.00 | 0.00 | 0.00 |

## 2.2 Material

## 2.3 Procedure

## 2.4 Data analysis

We used R (Version 4.1.3; R Core Team 2020) and the R-packages *ARTofR* (Version 0.4.1; Zhang 2021), *cowplot* (Version 1.1.1; Wilke 2020), *dplyr* (Version 1.0.8; Wickham et al. 2020), *forcats* (Version 0.5.1; Wickham 2020a), *ggplot2* (Version 3.3.5; Wickham 2016), *gridExtra* (Version 2.3; Auguie 2017), *lubridate* (Version 1.8.0; Grolemund and Wickham 2011), *needs* (Version 0.0.3; Katz 2016), *papaja* (Version 0.1.0.9999; Aust and Barth 2020), *purrr* (Version 0.3.4; Henry and Wickham 2020), *readr* (Version 2.1.2; Wickham and Hester 2020), *readxl* (Version 1.4.0; Wickham and Bryan 2019), *rlang* (Version 1.0.2; Henry and Wickham 2021), *stringr* (Version 1.4.0; Wickham 2019), *tibble* (Version 3.1.6; Müller and Wickham 2020), *tidyr* (Version 1.2.0; Wickham 2020b), *tidyverse* (Version 1.3.1; Wickham et al. 2019), *tinylabels* (Version 0.2.3; Barth 2022), *viridis* (Version 0.6.2; Garnier 2018a, 2018b), and *viridisLite* (Version 0.4.0; Garnier 2018b) for all our analyses.

# 3 Results

# 4 Discussion

# 5 References

Auguie, Baptiste. 2017. *gridExtra: Miscellaneous Functions for "Grid" Graphics*. <https://CRAN.R-project.org/package=gridExtra>.

Aust, Frederik, and Marius Barth. 2020. *papaja: Create APA Manuscripts with R Markdown*. <https://github.com/crsh/papaja>.

Barth, Marius. 2022. *tinylabels: Lightweight Variable Labels*. <https://cran.r-project.org/package=tinylabels>.

Garnier, Simon. 2018a. *Viridis: Default Color Maps from ’Matplotlib’*. <https://CRAN.R-project.org/package=viridis>.

———. 2018b. *viridisLite: Default Color Maps from ’Matplotlib’ (Lite Version)*. <https://CRAN.R-project.org/package=viridisLite>.

Grolemund, Garrett, and Hadley Wickham. 2011. “Dates and Times Made Easy with lubridate.” *Journal of Statistical Software* 40 (3): 1–25. <https://www.jstatsoft.org/v40/i03/>.

Henry, Lionel, and Hadley Wickham. 2020. *Purrr: Functional Programming Tools*. <https://CRAN.R-project.org/package=purrr>.

———. 2021. *Rlang: Functions for Base Types and Core r and ’Tidyverse’ Features*. <https://CRAN.R-project.org/package=rlang>.

Katz, Josh. 2016. *Needs: Attaches and Installs Packages*. <https://CRAN.R-project.org/package=needs>.

Müller, Kirill, and Hadley Wickham. 2020. *Tibble: Simple Data Frames*. <https://CRAN.R-project.org/package=tibble>.

R Core Team. 2020. *R: A Language and Environment for Statistical Computing*. Vienna, Austria: R Foundation for Statistical Computing. <https://www.R-project.org/>.

Wickham, Hadley. 2016. *Ggplot2: Elegant Graphics for Data Analysis*. Springer-Verlag New York. <https://ggplot2.tidyverse.org>.

———. 2019. *Stringr: Simple, Consistent Wrappers for Common String Operations*. <https://CRAN.R-project.org/package=stringr>.

———. 2020a. *Forcats: Tools for Working with Categorical Variables (Factors)*. <https://CRAN.R-project.org/package=forcats>.

———. 2020b. *Tidyr: Tidy Messy Data*. <https://CRAN.R-project.org/package=tidyr>.

Wickham, Hadley, Mara Averick, Jennifer Bryan, Winston Chang, Lucy D’Agostino McGowan, Romain François, Garrett Grolemund, et al. 2019. “Welcome to the tidyverse.” *Journal of Open Source Software* 4 (43): 1686. <https://doi.org/10.21105/joss.01686>.

Wickham, Hadley, and Jennifer Bryan. 2019. *Readxl: Read Excel Files*. <https://CRAN.R-project.org/package=readxl>.

Wickham, Hadley, Romain François, Lionel Henry, and Kirill Müller. 2020. *Dplyr: A Grammar of Data Manipulation*. <https://CRAN.R-project.org/package=dplyr>.

Wickham, Hadley, and Jim Hester. 2020. *Readr: Read Rectangular Text Data*. <https://CRAN.R-project.org/package=readr>.

Wilke, Claus O. 2020. *Cowplot: Streamlined Plot Theme and Plot Annotations for ’Ggplot2’*. <https://CRAN.R-project.org/package=cowplot>.

Zhang, Huanyuan. 2021. *ARTofR: Who Ever Care about the [Art of r] Scripts?* <https://CRAN.R-project.org/package=ARTofR>.