

**DataFest 2024**

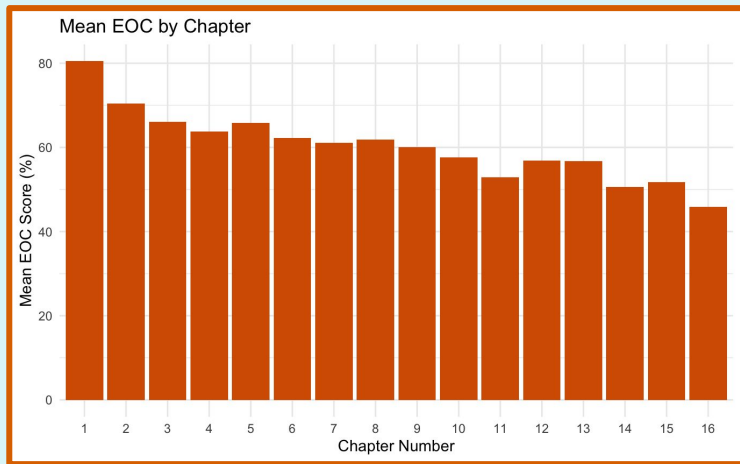
# **C.R.A.K.ing the Code to Improve Student Learning**

Team R-sonists



# Motivation

- Later chapters → more difficult
- Impact of non-review questions
- Newest Version (5.2)



# Recommendations

Add more:

- Non-review items in later chapters
- Cloze with drag and drop questions

If we wanted to change the x-axis to a different variable like `MathAnxious` (a measure of math anxiety), where would we put it? (Drag the variable name to the appropriate location in the R code.)

```
gf_histogram( [ ] ~ [ ], data = [ ] )
```

MathAnxious

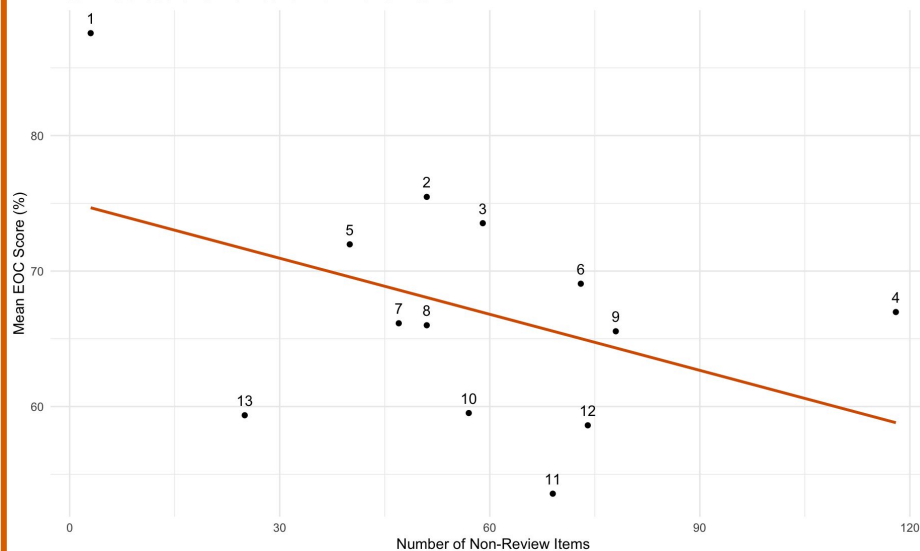


# Multivariate Regression

Response: **EOC & Engagement**

Predictors: **Non-Review Items**

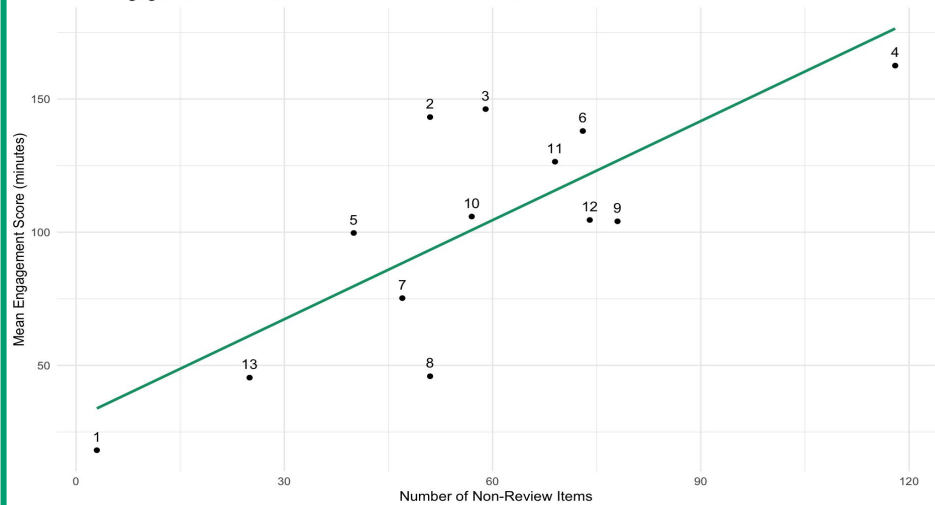
Mean EOC Score vs. Number of Non-Review Items



**p-value > 0.1**

**p-value = 0.00162**

Mean Engagement Score vs. Number of Non-Review Items



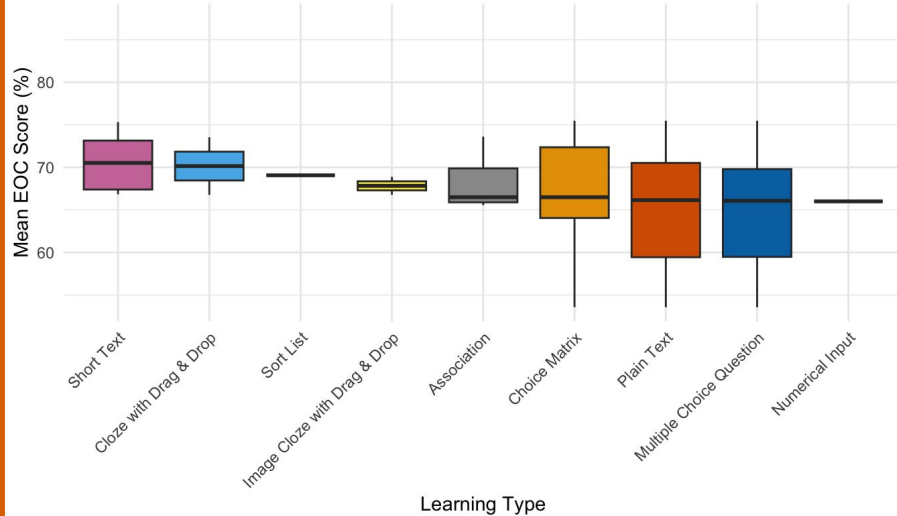


# One-Way MANOVA

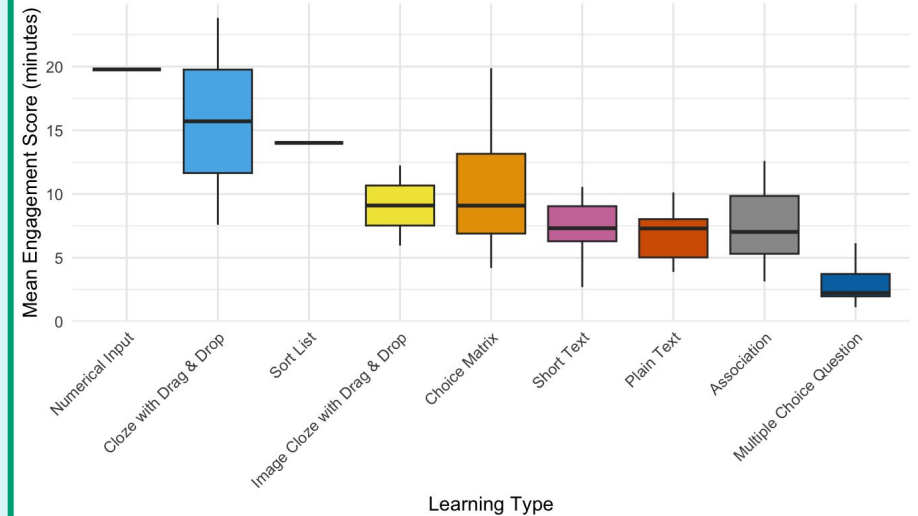
Response: **EOC & Engagement**

Explanatory: Type of Question

Mean EOC Scores by Learning Type



Mean Engagement Scores by Learning Type



Multiple Tukey pairwise comparisons yielded **significant** results for **engagement scores**

