Beauty in the classroom

INTRODUCTION TO DATA IN R

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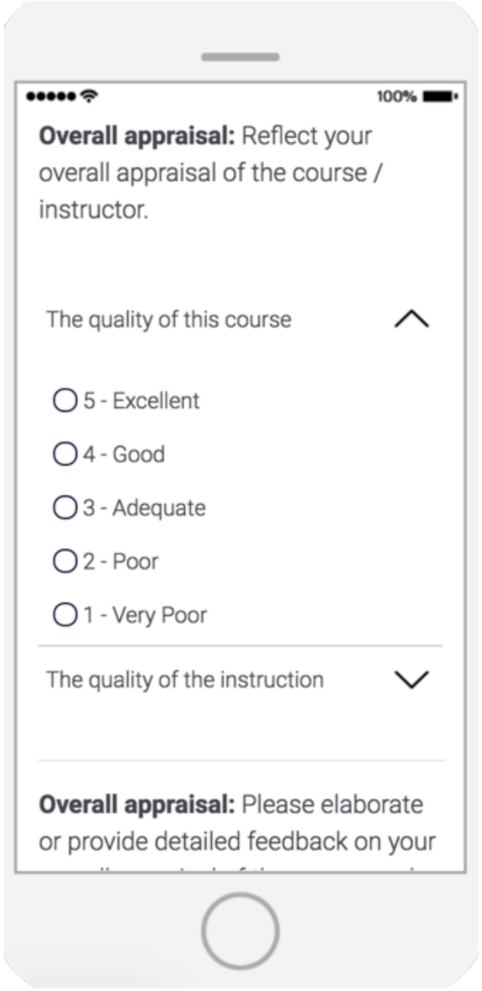
datacamp

The data



score	rank	ethnicity	...
4.7	tenure-track	minority	...
4.1	tenure-track	minority	...
3.9	tenure-track	minority	...
...	...	...	...
4.1	tenure_track	minority	...

Let's practice!

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Variables in the data

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evals

```
# Glimpse the data
glimpse(evals)
```

```
Observations: 463
Variables: 21
$ score <dbl> 4.7, 4.1, 3.9, 4.8, 4.6, 4.3...
$ rank <fctr> tenure track, tenure track,...
$ ethnicity <fctr> minority, minority, minorit...
$ gender <fctr> female, female, female, fem...
$ language <fctr> english, english, english, ...
$ age <int> 36, 36, 36, 36, 59, 59, 59, ...
$ cls_perc_eval <dbl> 55.81, 68.80, 60.80, 62.60, ...
$ cls_did_eval <int> 24, 86, 76, 77, 17, 35, 39, ...
$ cls_students <int> 43, 125, 125, 123, 20, 40, 4...
$ cls_level <fctr> upper, upper, upper, upper,...
$ cls_profs <fctr> single, single, single, sin...
$ cls_credits <fctr> multi credit, multi credit,...
```

evals (cont.)

```
# Glimpse the data
glimpse(evals)
```

```
...
$ bty_f1lower <int> 5, 5, 5, 5, 4, 4, 4, 5, 5, 2...
$ bty_f1upper <int> 7, 7, 7, 7, 4, 4, 4, 2, 2, 5...
$ bty_f2upper <int> 6, 6, 6, 6, 2, 2, 2, 5, 5, 4...
$ bty_m1lower <int> 2, 2, 2, 2, 2, 2, 2, 2, 2, 3...
$ bty_m1upper <int> 4, 4, 4, 4, 3, 3, 3, 3, 3, 3...
$ bty_m2upper <int> 6, 6, 6, 6, 3, 3, 3, 3, 3, 2...
$ bty_avg <dbl> 5.000, 5.000, 5.000, 5.000, ...
$ pic_outfit <fctr> not formal, not formal, not...
$ pic_color <fctr> color, color, color, color,...
```

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Congratulations!

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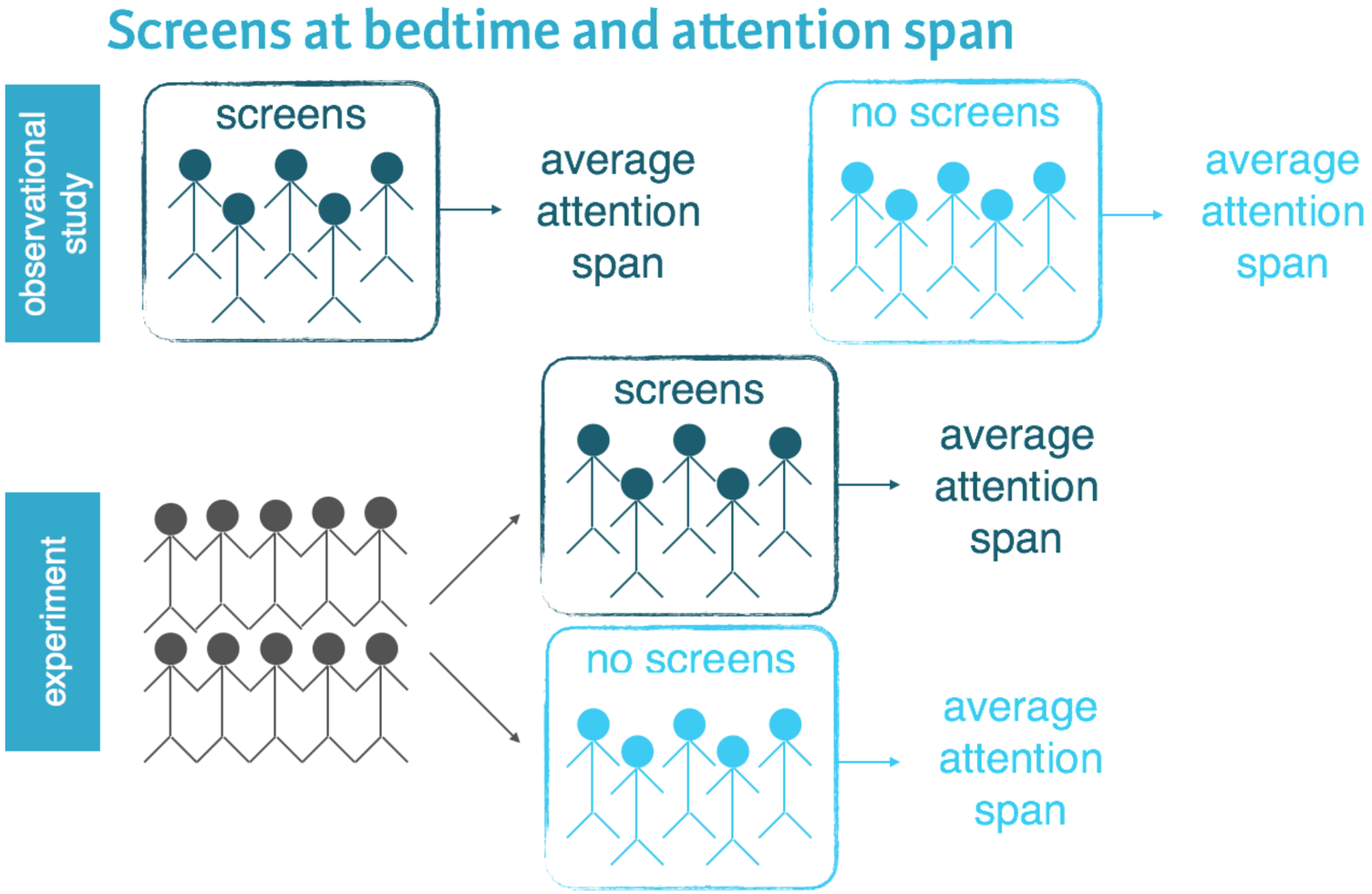
Designing a study



Viewing the structure of your data

```
# Load package
library(dplyr)
# View the structure of your data
glimpse(hsb2)
```

```
Observations: 200
Variables: 11
$ id <int> 70, 121, 86, 141, 172, 113, 50, 11, 84, 4...
$ gender <chr> "male", "female", "male", "male", "male",...
$ race <chr> "white", "white", "white", "white", "whit...
$ ses <fctr> low, middle, high, high, middle, middle,...
$ schtyp <fctr> public, public, public, public, public, ...
$ prog <fctr> general, vocational, general, vocational...
$ read <int> 57, 68, 44, 63, 47, 44, 50, 34, 63, 57, 6...
$ write <int> 52, 59, 33, 44, 52, 52, 59, 46, 57, 55, 4...
$ math <int> 41, 53, 54, 47, 57, 51, 42, 45, 54, 52, 5...
$ science <int> 47, 63, 58, 53, 53, 63, 53, 39, 58, 50, 5...
$ socst <int> 57, 61, 31, 56, 61, 61, 61, 36, 51, 51, 6...
```

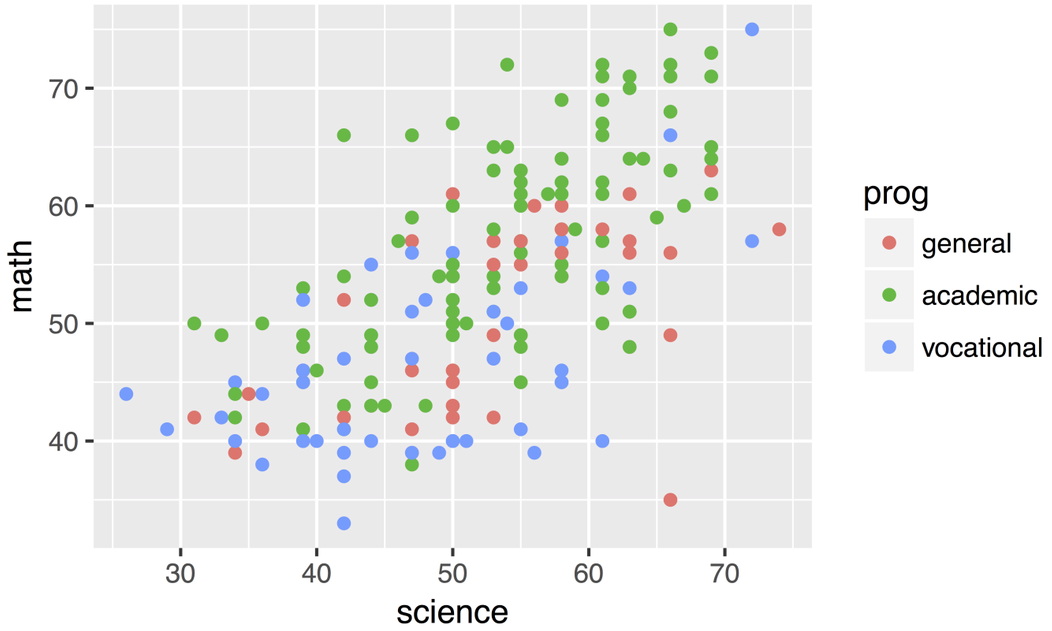
Data wrangling with dplyr

```
# State distribution of SRS counties
county_srs %>%
    group_by(state) %>%
    count()
```

```
# A tibble: 45 × 2
state n
<fctr> <int>
1 Alabama 2
2 Alaska 1
3 Arizona 1
4 Arkansas 3
5 California 4
6 Colorado 2
7 Florida 3
8 Georgia 9
9 Idaho 2
10 Illinois 5
# ... with 35 more rows
```

Data visualization with ggplot2

```
# Scatterplot of math vs. science scores, controlling for program
ggplot(data = hsb2, aes(x = science, y = math, color = prog)) +
    geom_point()
```



Congratulations!

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