

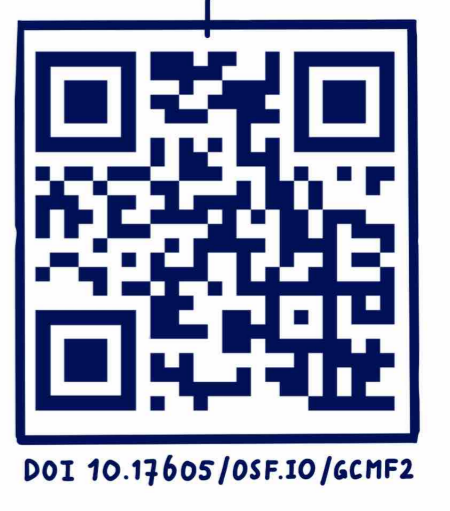
IT IS QUITE MISLEADING, YOU HAVE TO KEEP THINKING

STUDYING MISLEADING GRAPHS WITH VOCATIONAL STUDENTS - TENSIONS AND SURPRISES

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INTRODUCTION & THEORY

a lot of graphs are **MISLEADING**

a **CORRECTION** can debunk a misleading graph

VOCATIONAL STUDENTS are more easily misled

PARTICIPANTS: VOCATIONAL STUDENTS

training for a skilled **CRAFT**

UNDERREPRESENTED in research

DESIGN: MIXED METHODS

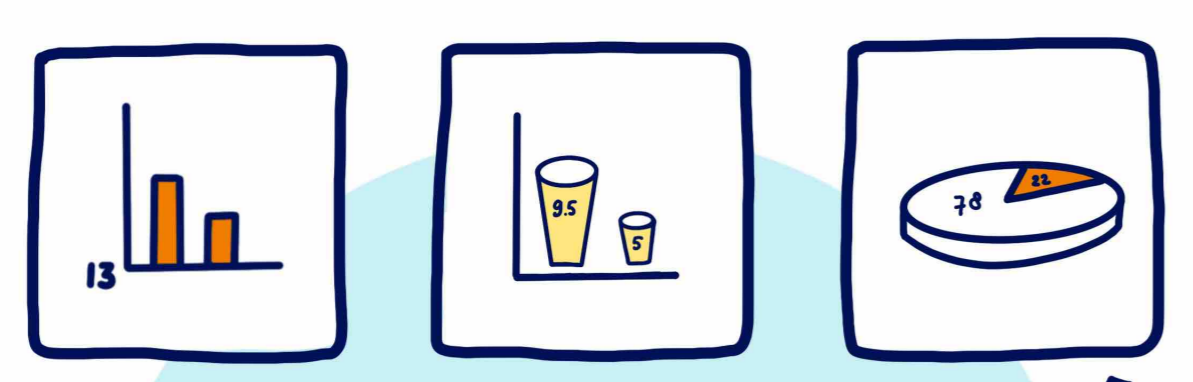
qualitative
THINK ALOUD TASK (n=10)

quantitative
SURVEY (n=130)

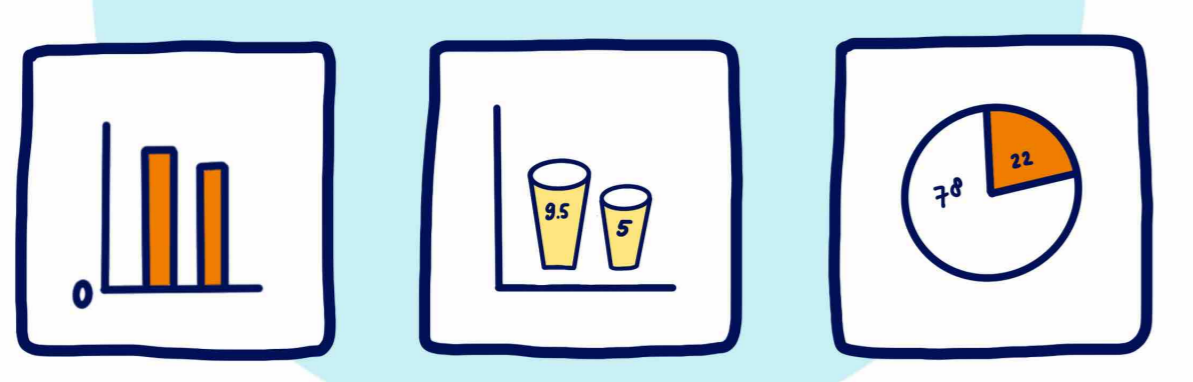
how do participants **INTERPRET** misleading graphs + corrections?

what is the most **EFFECTIVE DESIGN** (clean or full) of corrected misleading graphs?

MISLEADING GRAPHS



+ CORRECTIONS



bar graphs pictorial area charts pie charts

how do you evaluate the **DIFFERENCE** between the two **CATEGORIES**?



CONCLUSIONS

graph corrections work in **REDUCING** misleading effects



graph corrections have a **LEARNING EFFECT**: students are less misled by new misleading graphs of the same type

even if students **RECOGNIZE** the graph as misleading, they are **STILL MISLED**

clean or full design makes **NO DIFFERENCE** (personal preferences)



FUN FACTS

nobody mentioned the misleading 3D-effect in pie charts
 looks good to me!

Context matters a lot

'I think it's okay. Everybody has the right to decide how many animals they want to have'

TAKE-AWAY MESSAGES

vocational students use a combination of **ESTIMATING** and **CALCULATING** to process graphs

offering a **CORRECTION** is more important than the **DESIGN**