

Good Questions, Better Survey Data:

# An Introduction to Effective Questionnaire Design

## CONTACT









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 [dsc-ub.de](https://dsc-ub.de)

# Schedule for Today

-  09:30 **Welcome and Introduction**
-  09:50 Importance of a Good Questionnaire
-  10:10 Characteristics of a Good Questionnaire
-  10:30 Measurement Theory
-  10:50 **Coffee Break**
-  11:00 Types of Questions and Response Scales
-  11:30 Questionnaire Structure and Layout
-  12:00 **Lunch Break**

-  13:00 Challenges and Pretesting
-  13:40 Using Existing Instruments
-  14:00 **Coffee Break**
-  14:10 Ethics and Data Protection
-  14:40 Documentation
-  15:10 Getting Started
-  15:20 **Wrap-Up**

## Housekeeping

- Have your phones ready.
- Slides will be shared at the end.
- Certificates will be sent after the training.
- Questions welcome 😊
- There are no stupid questions – this is (hopefully) a safe space!



# Who am I?

## Susanne de Vogel (she/her)

### Social Scientist

- Diploma in Social Sciences (2013), University of Cologne and Utrecht University
- PhD in Sociology (2019), Martin-Luther-University Halle-Wittenberg
- Research Associate at DZHW German Centre for Higher Education Research and Science Studies (2013-2020), Hannover
- National Academics Panel Study (Nacaps) and PhD Graduate Panel; survey design, panel data analysis, research data management
- Research on educational inequalities, early career researchers, academia

Since May 2024 **Data Scientist** at the **Data Science Center**

- Training and consulting for researchers
- Data science and research data management





## PhD Panel Study (Promoviertenpanel)

Project duration: September 2013 – March 2024 (funded by BMBF)

Target population: census survey

- All persons who completed a doctorate at a German HEI in 2014 (N=28,147)
- All formal contexts and subjects
- Initial sample size n=5,408 (response rate 27%); follow-ups ca. n=3,000

Survey design: longitudinal study

- Initial wave about one year after graduation, paper-pencil
- Nine annual follow-up surveys, online



German Centre for Higher Education Research and Science Studies (2024). DZHW PhD Panel 2014 - Survey 1. Data collection: 2015. Hanover: FDZ-DZHW.10.21249/DZHW:phd2014:4.0.0. Questionnaire "Karrieren Promovierter" (1<sup>st</sup> wave - German)". Cover page.

**DZHW**  
Deutsches Zentrum für  
Hochschul- und Wissenschaftsforschung

### Herzlich Willkommen zur zweiten bundesweiten Promoviertenbefragung!

Wir wissen zu schätzen, dass Sie sich die Zeit nehmen, diese Befragung durch Ihre Teilnahme zu unterstützen. Die beruflichen und privaten Erfahrungen, die Sie seit dem Abschluss Ihrer Promotion gesammelt haben, bilden eine wichtige Informationsgrundlage für Hochschulpolitik und -forschung.

Die Beantwortung des Fragebogens wird in Abhängigkeit vom Antwortverhalten ca. 20 bis 30 Minuten in Anspruch nehmen. Sie haben jederzeit die Möglichkeit, die Befragung zu unterbrechen und zu einem späteren Zeitpunkt fortzuführen.

Weitere Informationen zur Befragung und zum Datenschutz haben wir für Sie auf folgender Seite zusammengestellt: [www.dzhw.eu/promovierte/datenschutz](http://www.dzhw.eu/promovierte/datenschutz).

Vielen Dank im Voraus für Ihre Teilnahme.

Kolja Briedis (Projektleitung)

Kontakt: [promovierte@dzhw.eu](mailto:promovierte@dzhw.eu)

Telefonisch erreichen Sie unser Team unter +49 (0)511 450670-109

0%

Weiter

Logout

German Centre for Higher Education Research and Science Studies (2024). DZHW PhD Panel 2014 - Survey 4. Data collection: 2019. Hanover: FDZ-DZHW.10.21249/DZHW:phd2014:4.0.0. Questionnaire "Karrieren Promovierter" (4<sup>th</sup> wave - German)". Index page.

## National Academics Panel Study (Nacaps)

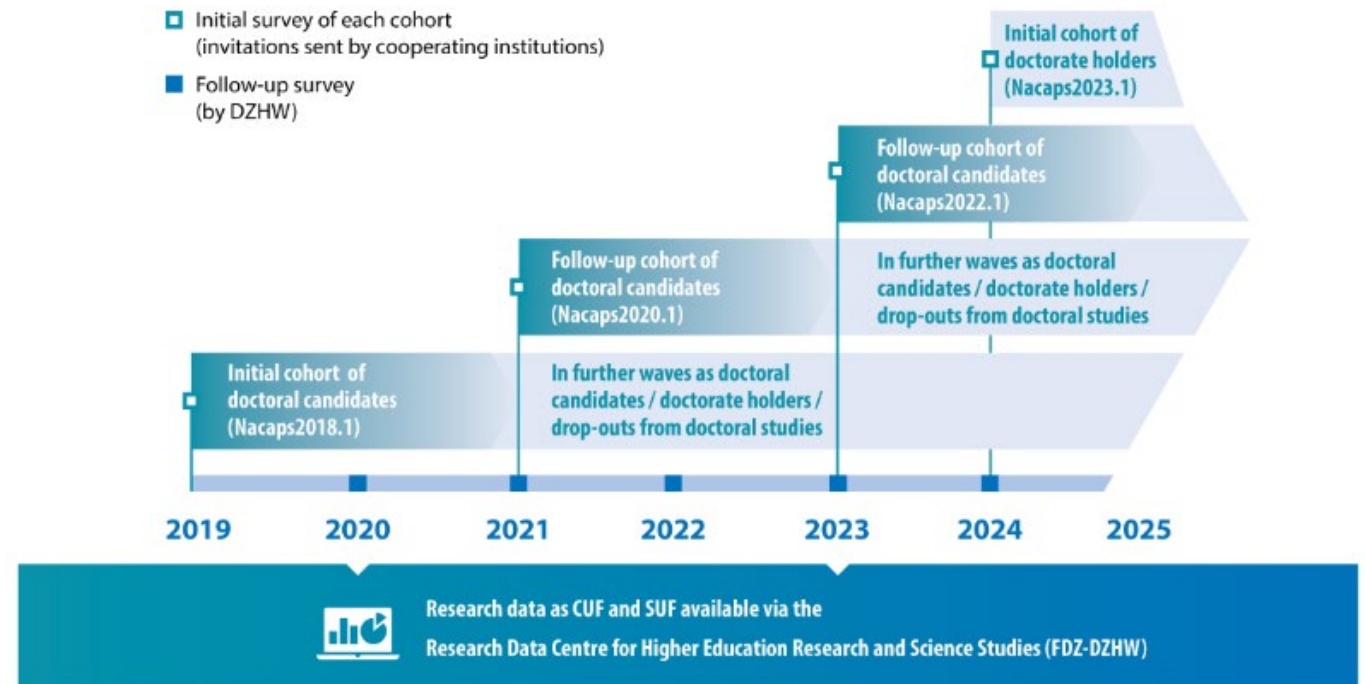
Project duration: Januar 2017 – ongoing (funded by BMBF)

Target population: census survey

- All persons who started/completed a doctorate at a German HEI
- 66 participating universities

Survey design: multicohort longitudinal study

- Initial wave about one year after starting/graduating PhD
- annual follow-up surveys
- New cohort every other year (doctoral candidates since 2018; doctorate holders since 2024)
- online



German Centre for Higher Education Research and Science Studies (DZHW) (2018). *Nacaps study design – survey logic*. Retrieved June 25, 2025, from [https://www.nacaps.de/en/studie/index\\_html#studiendesign](https://www.nacaps.de/en/studie/index_html#studiendesign). Used with permission for educational purposes as stated on the website.

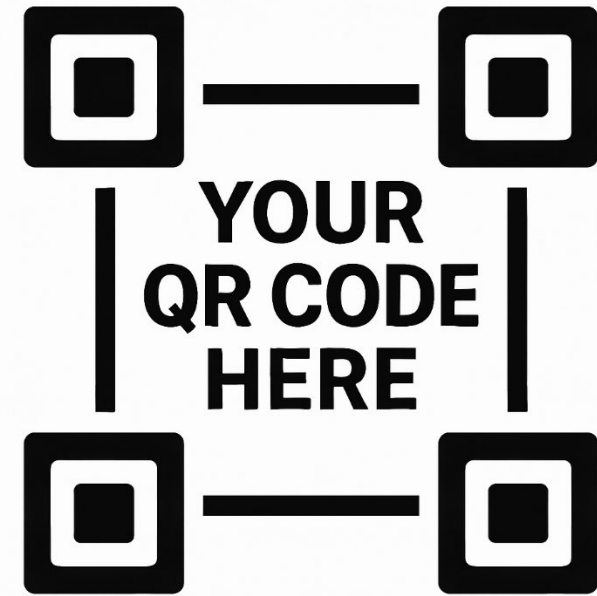
## Brief round of introductions



- Name (pronouns)
- Institution
- Discipline



## Survey!



Visit  
[www.menti.com](https://www.menti.com)

Enter code



## **Why Is a Well-Designed Questionnaire Important?**



## Why is a well-designed questionnaire important...

- ... for data quality?
- ... for project requirements?
- ... for organizing your research?





## A well-designed questionnaire...

- ✓ ... ensures data quality
  - Data validity
  - Data reliability
  - Complete data set
  - Minimizing bias
- ✓ ... meets your project/analysis requirements
  - All relevant information included
  - Construct fit for analysis
- ✓ ... enables efficient research organization
- ✓ ... is compliant with existing legal or ethical requirements
- ✓ ... makes your data reusable



## **Characteristics of a Well-Designed Questionnaire**

## A well-designed questionnaire...

collects  
**accurate**  
**information**

meets **legal**  
**requirements**



Screenshot from *SpongeBob SquarePants*, Nickelodeon / Viacom. Meme created using imgflip.com (accessed June 25, 2025). Used for non-commercial educational purposes.

minimizes  
**response**  
**burden**

documented for  
**publication and reuse**



## Accuracy

Accurate information refers to responses that **correctly reflect** the respondent's true opinions, behaviors, or characteristics.

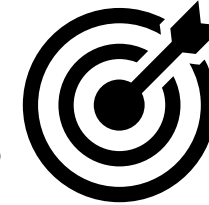
- The instruments are **valid** and **reliable**
- The questions are **understood properly** by the respondent
- The respondents **answer them truthfully** and precisely
- Accurate information are a **prerequisite for good data quality**



Screenshot from *The Office* (NBC / Universal Television). Meme created using makeameme.org (accessed June 25, 2025). Used for non-commercial educational purposes.

## Data validity

Do the questions measure what they are **intended to measure**?



### Content validity

Does the instrument cover **all relevant aspects** of the concept being measured?

Job Proficiency Test:  
A test for graphic designer that assesses software knowledge but ignores understanding of design principles lacks content validity.



### Construct validity

Does the instrument **accurately measure the theoretical concept** it is intended to assess?

Stress Assessment Test:  
A test trying to measure “stress” should reflect the psychological and emotional aspects of stress.



### Criterion validity

Do the instruments outcomes **relate to the outcomes of another measures**?

Concurrent validity: Does it relate to an existing **similar measure**?

Predictive validity: Does the instrument **predict future outcomes**? (e. g. a job aptitude test predicting future job performance)

## Data reliability

Will the questionnaire produce the **same or similar results** under consistent conditions?

- If the same person were to answer the same questionnaire multiple times (assuming no change in their opinions or circumstances), they would give similar answers each time



### Internal Consistency

Questions that are supposed to measure the same concept or construct (e. g. anxiety, satisfaction) should produce **consistent results**.



### Test-Retest Reliability

Questions yield similar results when administered to the same respondents at **different points in time**.



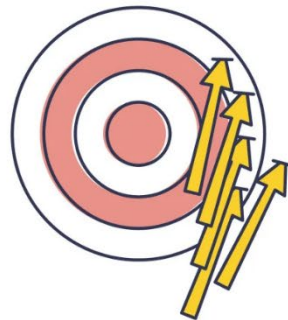
### Inter-Rater Reliability

If the questionnaire involves subjective assessments, **different people** (raters) who interpret the responses should come to similar conclusions.

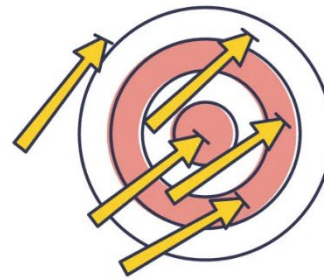


## Validity vs. Reliability

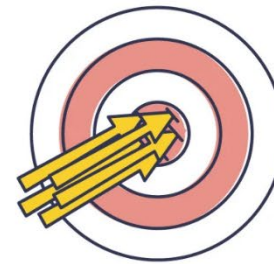
**RELIABLE  
BUT NOT VALID**



**VALID  
BUT NOT RELIABLE**



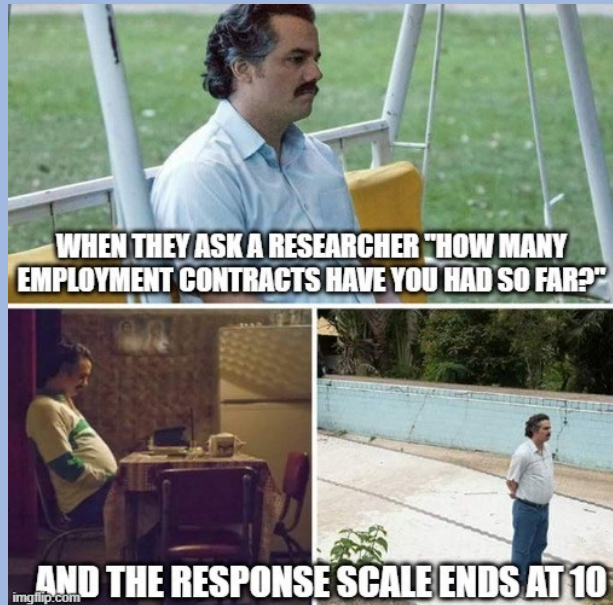
**VALID  
AND RELIABLE**



**VALIDITY  
VS  
RELIABILITY**



## What to consider?



Screenshots from Narcos (Netflix, Gaumont International Television), Meme created using imgflip.com. Retrieved June 25, 2025. Used for non-commercial educational purposes.

Relevant and exhaustive response options

Questions must be clearly worded

Provide clear instructions

That Scooter you know

That Scooter I know



@memes\_be\_like\_ha

Questions should be culturally appropriate and contextually relevant

HeroXD (2019). Scooter and Scooter MEME. Retrieved June 25, 2025, from <https://www.deviantart.com/heroxd/art/Scooter-and-Scooter-MEME-793711534>. Used for non-commercial educational purposes.

## Response... what?

Response burden refers to the **perceived effort, time, and complexity that respondents experience** when completing a questionnaire or survey.

- A high response burden can **negatively affect the data quality**:
  - Lower response rates/ high drop-out
  - Incomplete responses
  - Inaccurate or random answers
  - Bias (e.g. only highly motivated people respond)
- Keep that **response burden low** 😊



@betweenwalks (n.d.). "I've been carrying a heavy burden..." Comic. Retrieved June 25, 2025, from <https://www.instagram.com/betweenwalks>. Used for non-commercial educational purposes.



## Three types of response burden

### Time burden

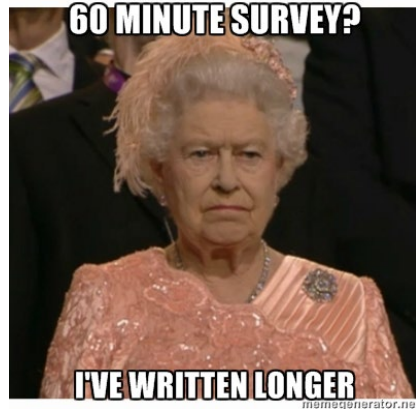
Time it takes to complete the questionnaire

### Cognitive burden

Mental effort required to understand and answer the questions

### Emotional burden

Emotional strain or discomfort experienced by respondents



- Questions relevant for project and respondent
- Keep questionnaire short and concise

The image shows three screenshots of a questionnaire interface. The first screenshot (C13) shows a question about 'Everyone has certain goals that are particularly important in life and others that are less important in comparison. First of all, we would like to introduce you to a number of professional goals. Please indicate how important the following goals are to you personally.' The second screenshot (C13a) shows a question about 'Everyone has certain goals that are particularly important in life and others that are less important in comparison. First of all, we would like to introduce you to a number of professional goals. Please indicate how important the following goals are to you personally.' The third screenshot (C13b) shows a question about 'Everyone has certain goals that are particularly important in life and others that are less important in comparison. First of all, we would like to introduce you to a number of professional goals. Please indicate how important the following goals are to you personally.'

- Use simple and clear language, avoid technical jargon, appropriate to target group, provide instructions
- No repetitive or redundant questions
- Clear layout
- Questionnaire follows logical flow



- Use sensitive and respectful language
- Provide purpose and instructions
- Assure confidentiality
- Allow skipping questions

## Ethical and legal requirements

Is data collected in accordance with **data protection**, **copyright**, and **ethical regulations**?

- Compliance of the questionnaire with legal and ethical regulations ensures that the data can be collected, stored, processed, and published.

### After backlash, publisher to retract article that surveyed parents of children with gender dysphoria, says co-author

Springer Nature will retract an article that reported results of a survey of parents who thought their children's gender dysphoria resulted from social contagion. The move is "due to concerns about lack of informed consent," according to tweets by one of the paper's authors. The article,

Retraction Watch (2023, May 24). *After backlash, publisher to retract article that surveyed parents of children with gender dysphoria, says co-author*. Retrieved June 25, 2025, from <https://retractionwatch.com/2023/05/24/after-backlash-publisher-to-retract-article-that-surveyed-parents-of-children-with-gender-dysphoria-says-co-author/>

### HIV paper pulled for lack of consent, errors

A researcher failed to obtain proper consent from HIV patients included in his study about risky sexual behavior, according to the journal that retracted his paper.



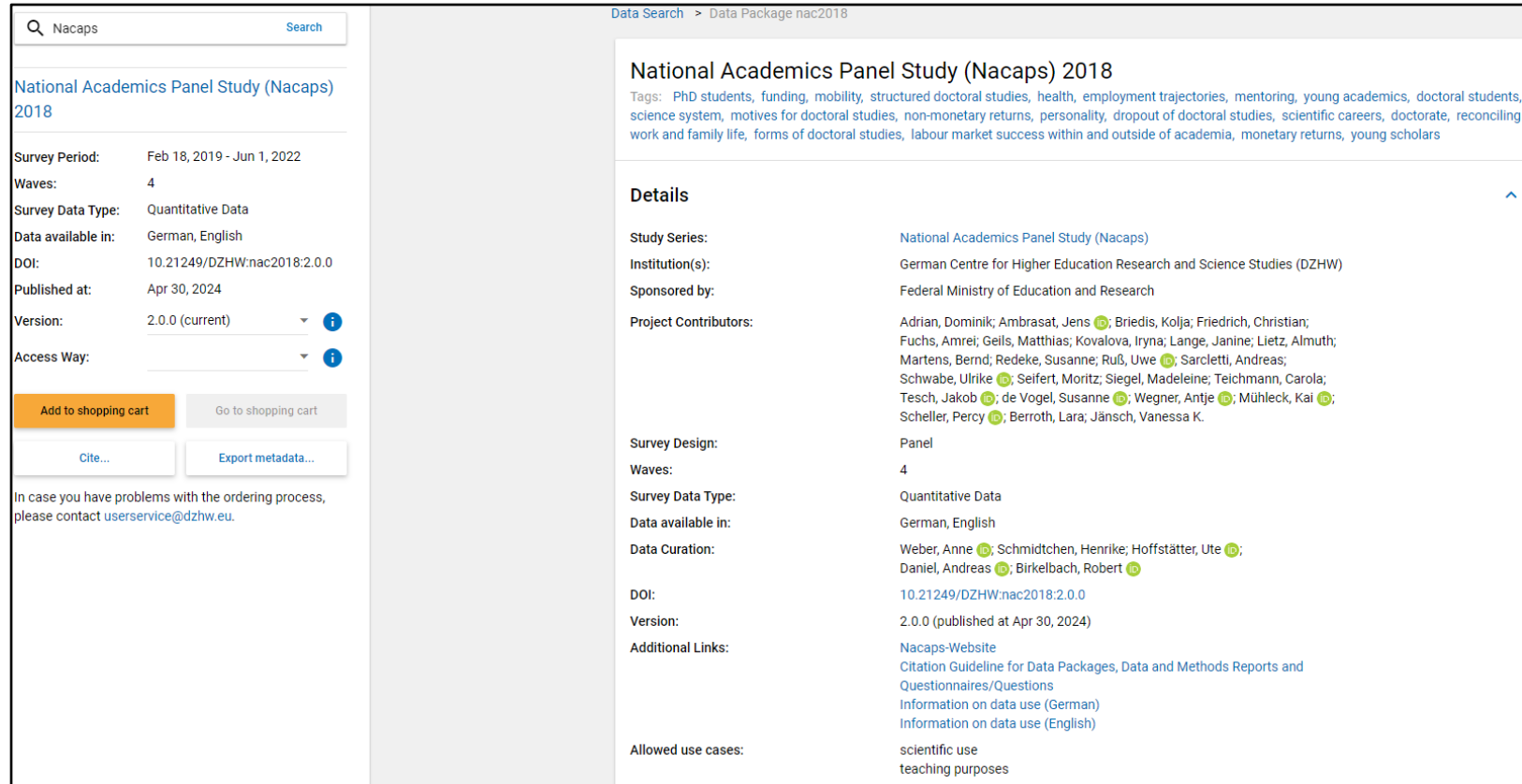
The study, based on interviews with 154 men and women living with HIV, concluded that experiencing negative life events correlated with risky sexual behavior. But although the author claimed to have complied with the journal's standard of consent, the journal disagreed, and retracted the paper in 2014 (we think this case is interesting enough to share with you now). What's more, ac-

Retraction Watch (2016, June 28). *HIV paper pulled for lack of consent, errors*. Retrieved June 25, 2025, from <https://retractionwatch.com/2016/06/28/hiv-paper-pulled-for-lack-of-consent-errors/>

## Data publication and reuse

Is the questionnaire designed and the design process documented with publication and reuse in mind?

- By following proper standards for data collection and documentation, data remains understandable and usable to other researchers or yourself in the future.



The screenshot displays the metadata page for the National Academics Panel Study (Nacaps) 2018 on the FDZ-DZHW Metadata Portal. The page is divided into two main sections: a left sidebar with search and action buttons, and a main content area with detailed study information.

**Search and Action Bar (Left Sidebar):**

- Search bar: "Nacaps" with a "Search" button.
- Study Title: "National Academics Panel Study (Nacaps) 2018".
- Survey Period: "Feb 18, 2019 - Jun 1, 2022".
- Waves: "4".
- Survey Data Type: "Quantitative Data".
- Data available in: "German, English".
- DOI: "10.21249/DZHW.nac2018:2.0.0".
- Published at: "Apr 30, 2024".
- Version: "2.0.0 (current)" with an information icon.
- Access Way: with an information icon.
- Buttons: "Add to shopping cart", "Go to shopping cart", "Cite...", "Export metadata...".
- Footer note: "In case you have problems with the ordering process, please contact [userservice@dzhw.eu](mailto:userservice@dzhw.eu)."

**Main Content Area (Right):**

**Data Search > Data Package nac2018**

### National Academics Panel Study (Nacaps) 2018

Tags: PhD students, funding, mobility, structured doctoral studies, health, employment trajectories, mentoring, young academics, doctoral students, science system, motives for doctoral studies, non-monetary returns, personality, dropout of doctoral studies, scientific careers, doctorate, reconciling work and family life, forms of doctoral studies, labour market success within and outside of academia, monetary returns, young scholars

#### Details

**Study Series:** [National Academics Panel Study \(Nacaps\)](#)

**Institution(s):** German Centre for Higher Education Research and Science Studies (DZHW)

**Sponsored by:** Federal Ministry of Education and Research

**Project Contributors:** Adrian, Dominik; Ambrasat, Jens; Briedis, Kolja; Friedrich, Christian; Fuchs, Amrei; Gells, Matthias; Kovalova, Iryna; Lange, Janine; Lietz, Almuth; Martens, Bernd; Redeke, Susanne; Ruß, Uwe; Sarcletti, Andreas; Schwabe, Ulrike; Selfert, Moritz; Siegel, Madeleine; Teichmann, Carola; Tesch, Jakob; de Vogel, Susanne; Wegner, Antje; Mühleck, Kai; Scheller, Percy; Berroth, Lara; Jänsch, Vanessa K.

**Survey Design:** Panel

**Waves:** 4

**Survey Data Type:** Quantitative Data

**Data available in:** German, English

**Data Curation:** Weber, Anne; Schmidtchen, Henrike; Hoffstätter, Ute; Daniel, Andreas; Birkelbach, Robert

**DOI:** 10.21249/DZHW.nac2018:2.0.0

**Version:** 2.0.0 (published at Apr 30, 2024)

**Additional Links:** [Nacaps-Website](#), [Citation Guideline for Data Packages, Data and Methods Reports and Questionnaires/Questions](#), [Information on data use \(German\)](#), [Information on data use \(English\)](#)

**Allowed use cases:** scientific use, teaching purposes

German Centre for Higher Education Research and Science Studies (DZHW). (n.d.). National Academics Panel Study (Nacaps), 2018 – Version 2.0.0. FDZ-DZHW Metadata Portal. Retrieved June 25, 2025, from <https://metadata.fdz.dzhw.eu/de/data-packages/stu-nac2018?page=1&size=10&type=surveys&version=2.0.0>



# Measurement Theory

## Relevant theoretical/statistical concepts

- ✓ Levels of measurements
- ✓ Types of constructs
- ✓ Total Survey Error Framework



Image of a baby pygmy hippopotamus (original photo source unknown). Meme created using imgflip.com (accessed June 25, 2025).

## Definition

How is each variable **measured**?

What is the **mathematical nature of the values** assigned to each variable?

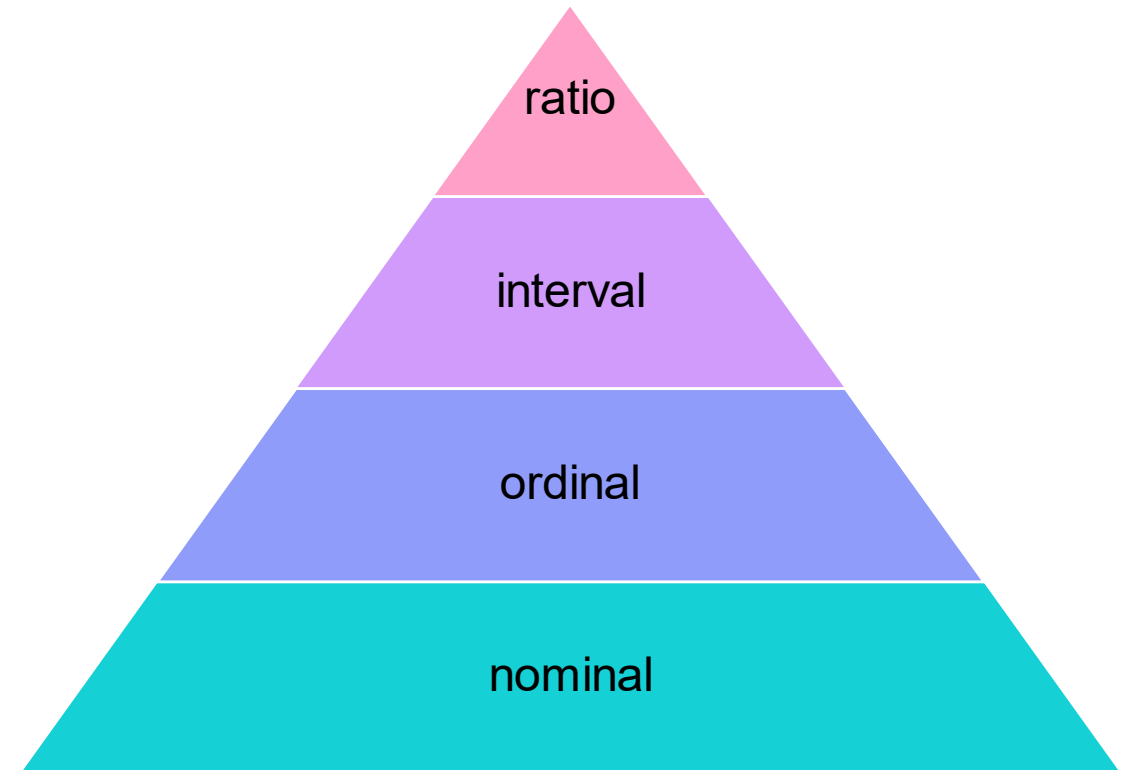
## Importance

Level of measurement determines the type of **statistical analysis** you can carry out with the outcomes of your questions

These levels reflect how data can be

- quantified
- analyzed
- interpreted

## Four levels of measurement

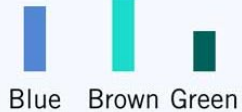


## Nominal data

Nominal data divides variables into mutually exclusive, labeled categories.

### Examples

Eye color



Smartphone



Transport

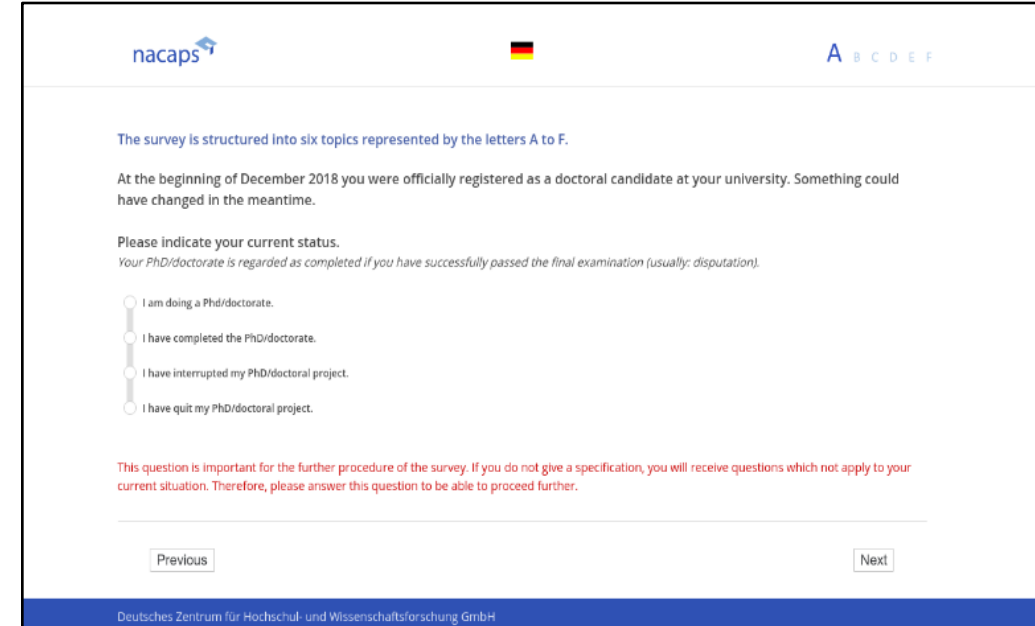


How is nominal  
data analyzed?

**Descriptive statistics:**  
Frequency distribution  
and mode

**Non-parametric  
statistical tests**

CareerFoundry. (n.d.). *Data levels of measurement: A beginner's guide*. Retrieved June 25, 2025, from <https://careerfoundry.com/en/blog/data-analytics/data-levels-of-measurement/>.



The survey is structured into six topics represented by the letters A to F.

At the beginning of December 2018 you were officially registered as a doctoral candidate at your university. Something could have changed in the meantime.

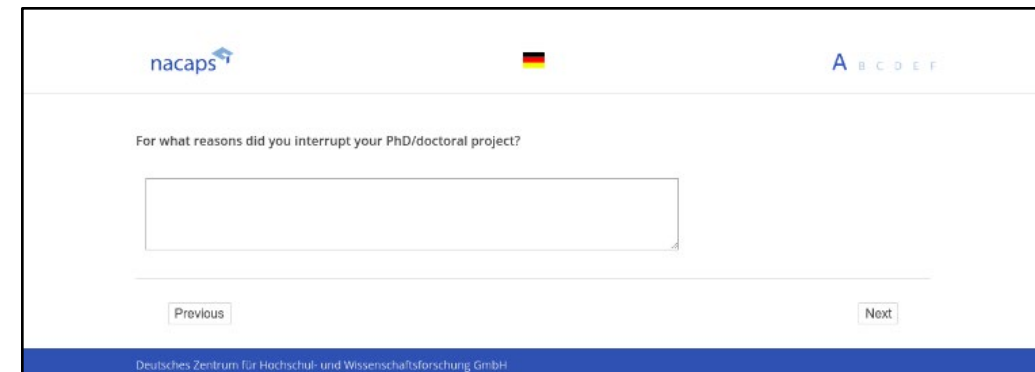
Please indicate your current status.  
Your PhD/doctorate is regarded as completed if you have successfully passed the final examination (usually: disputation).

- ☐ I am doing a PhD/doctorate.
- ☐ I have completed the PhD/doctorate.
- ☐ I have interrupted my PhD/doctoral project.
- ☐ I have quit my PhD/doctoral project.

This question is important for the further procedure of the survey. If you do not give a specification, you will receive questions which not apply to your current situation. Therefore, please answer this question to be able to proceed further.

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For what reasons did you interrupt your PhD/doctoral project?

Previous Next

Deutsches Zentrum für Hochschul- und Wissenschaftsforschung GmbH

German Centre for Higher Education Research and Science Studies (2024). National Academics Panel Study (Nacaps) 2018 - Survey 4. Data collection: 2022. Hanover: FDZ-DZHW. <https://doi.org/10.21249/DZHW:nac2018:2.0.0>. Questionnaire "Nacaps 2018. Variable Questionnaire for National Academics Panel Study 2018 (4th wave - doctoral candidates) (English)". Question A01 & A02.



## Ordinal data

Ordinal data classifies variables into categories which have a natural order or rank.

### Examples

School grades



Education level



Seniority level

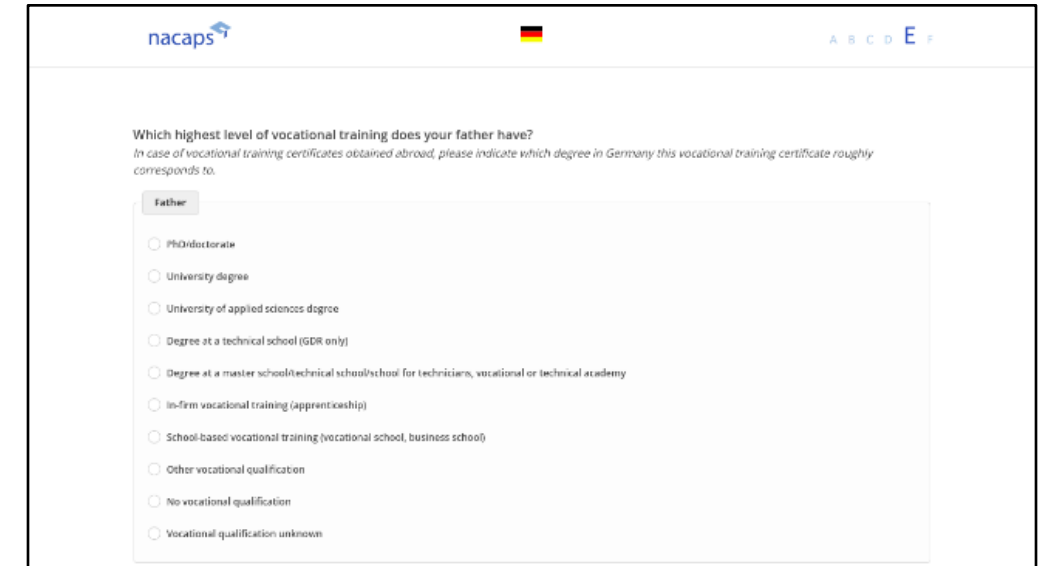



How is ordinal data analyzed?

**Descriptive statistics:**  
Frequency distribution, mode, median, and range

**Non-parametric statistical tests**

CareerFoundry. (n.d.). *Data levels of measurement: A beginner's guide*. Retrieved from <https://careerfoundry.com/en/blog/data-analytics/data-levels-of-measurement/> (retrieved June 25, 2025).



nacaps  A B C D E F

Which highest level of vocational training does your father have?  
*In case of vocational training certificates obtained abroad, please indicate which degree in Germany this vocational training certificate roughly corresponds to.*

Father

- ☐ PhD/doctorate
- ☐ University degree
- ☐ University of applied sciences degree
- ☐ Degree at a technical school (GDR only)
- ☐ Degree at a master school/technical school/school for technicians, vocational or technical academy
- ☐ In-firm vocational training (apprenticeship)
- ☐ School-based vocational training (vocational school, business school)
- ☐ Other vocational qualification
- ☐ No vocational qualification
- ☐ Vocational qualification unknown

German Centre for Higher Education Research and Science Studies (2024). National Academics Panel Study (Nacaps) 2018 - Survey 1. Data collection: 2019. Hanover: FDZ-DZHW. <https://doi.org/10.21249/DZHW:nac2018:2.0.0>. Questionnaire "Nacaps 2018. Variable Questionnaire for National Academics Panel Study 2018 (1st wave - doctoral candidates) (English)". Question E13.



DZHW. nacaps  A B C D 

How would you describe your general state of health?

very good      good      average      poor      very poor



German Centre for Higher Education Research and Science Studies (2024). National Academics Panel Study (Nacaps) 2018 - Survey 4. Data collection: 2022. Hanover: FDZ-DZHW. <https://doi.org/10.21249/DZHW:nac2018:2.0.0>. Questionnaire "Nacaps 2018. Variable Questionnaire for National Academics Panel Study 2018 (4th wave - doctoral candidates) (English)". Question C08.

## Interval data

Interval data is measured along a numerical scale that has equal intervals between adjacent values.

### Examples

Temperature

90°  
80°  
70°



IQ score





Income ranges



**How is interval data analyzed?**

**Descriptive statistics:** Frequency distribution; mode, median, and mean; range, standard deviation, and variance


**Parametric statistical tests** (e.g. t-test, linear regression)


DZHW. nacaps  A B C D 

**When did you start your current/last job?**

*If you are (currently) not employed, please refer to your last job or the job before interrupting employment.*

**Beginning:**

Month 

Year 

German Centre for Higher Education Research and Science Studies (2024). National Academics Panel Study (Nacaps) 2018 - Survey 4. Data collection: 2022. Hanover: FDZ-DZHW. <https://doi.org/10.21249/DZHW:nac2018:2.0.0>. Questionnaire "Nacaps 2018. Variable Questionnaire for National Academics Panel Study 2018 (4th wave - doctoral candidates) (English)". Question B08.

## Ratio data

Ratio data is measured along a numerical scale that has equal distances between adjacent values, and a true zero.

### Examples

Weight in KG



Number of staff



Income in USD




### How is ratio data analyzed?

**Descriptive statistics:** Frequency distribution; mode, median, and mean; range, standard deviation, variance, and coefficient of variation

**Parametric statistical tests** (e.g. ANOVA, linear regression)

CareerFoundry. (n.d.). *Data levels of measurement: A beginner's guide*. Retrieved June 25, 2025, from <https://careerfoundry.com/en/blog/data-analytics/data-levels-of-measurement/>.

DZHW. nacaps  A B C D

How many people are currently supervising your doctoral project?


Please include all people who actually (co-)supervise your PhD/doctorate, even if they are not official reviewers. Please enter numbers only.

☐  person(s)

☐ I do not have a supervisor yet.

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DZHW. nacaps  A B C D

How high is/was your monthly gross income (before deducting taxes and social contributions), including regular monthly bonuses (e. g. shift bonuses, performance bonuses and paid overtime)?

For the self-employed: How much are/were your average earnings before taxes or your fees collected each month?

For persons employed abroad: Please indicate your gross income without converting and enlist the local currency (e. g. US-Dollar or CHF) in the second input field.

If you are (currently) not employed, please refer to your last job or the job before interrupting employment.

Please round to full amounts of Euros and dispense of decimal places and delimiters (12345 instead of 12.345,00).

Amount:  Euro/month

Currency:  (if a currency other than Euro)

Previous Next

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German Centre for Higher Education Research and Science Studies (2024). National Academics Panel Study (Nacaps) 2018 - Survey 4. Data collection: 2022. Hanover: FDZ-DZHW. <https://doi.org/10.21249/DZHW:nac2018:2.0.0>. Questionnaire "Nacaps 2018. Variable Questionnaire for National Academics Panel Study 2018 (4th wave - doctoral candidates) (English)". Questions A03 & B17.

## Comparison

### THE FOUR LEVELS OF MEASUREMENT:

	Nominal	Ordinal	Interval	Ratio
Categorizes and labels variables	✓	✓	✓	✓
Ranks categories in order		✓	✓	✓
Has known, equal intervals			✓	✓
Has a true or meaningful zero				✓



## Definition

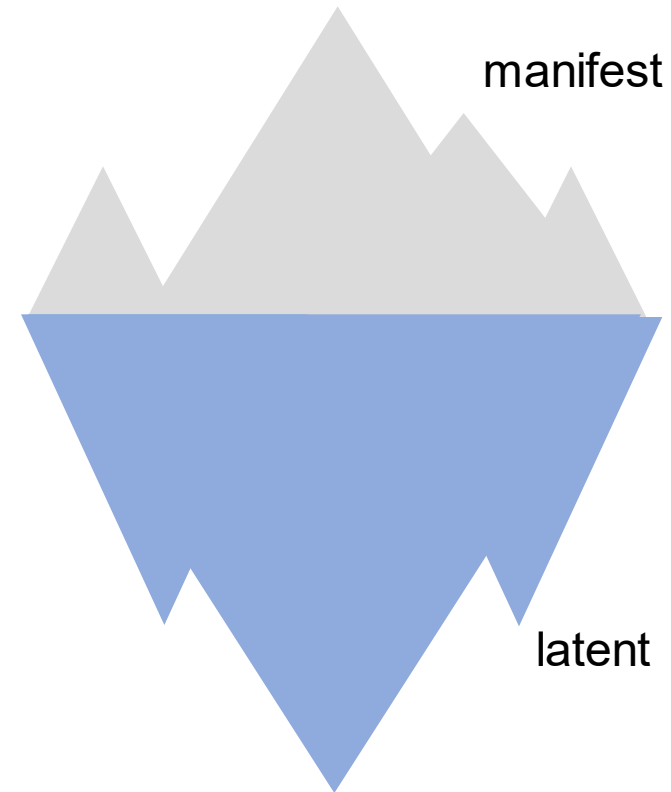
How is a variable **observed and measured**?

## Importance

Understanding the relationship between manifest and latent constructs ensures that researchers choose the **right observable variable** to measure abstract concepts.

This leads to better validity.

## Two types of constructs



## Manifest construct

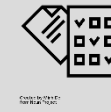
Manifest constructs (also called manifest variables or observable variables) refer to directly observable and measurable variables



can be seen, counted, or measured directly

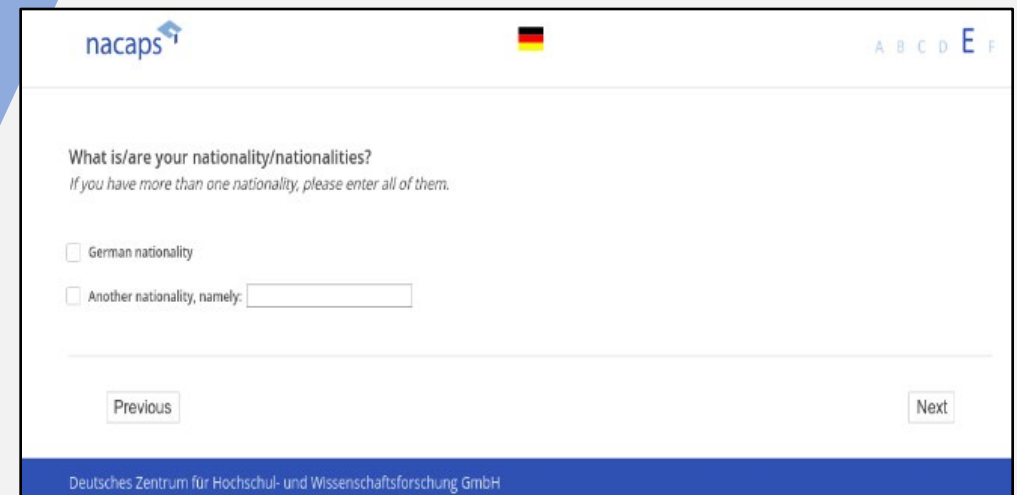


often involve simple, concrete data points., e.g. numerical values or categories



tangible attributes or behaviors

- Age
- Income
- Number of hours worked
- Test scores on specific questions



The screenshot shows a survey interface for 'nacaps' (National Academics Panel Study). The question is 'What is/are your nationality/nationalities?' with a subtext 'If you have more than one nationality, please enter all of them.' There are two checkboxes: 'German nationality' and 'Another nationality, namely:'. Below the checkboxes are 'Previous' and 'Next' buttons. The footer of the survey interface reads 'Deutsches Zentrum für Hochschul- und Wissenschaftsforschung GmbH'.

## Latent construct

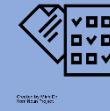
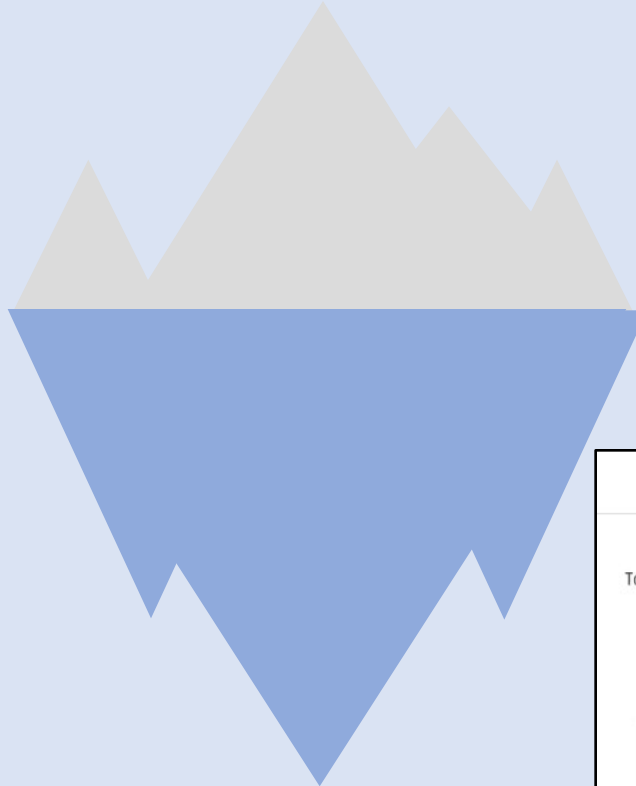
Latent constructs refer to abstract, unobservable variables that cannot be directly measured or observed



Observable indicators (manifest variables) that are thought to reflect the latent construct

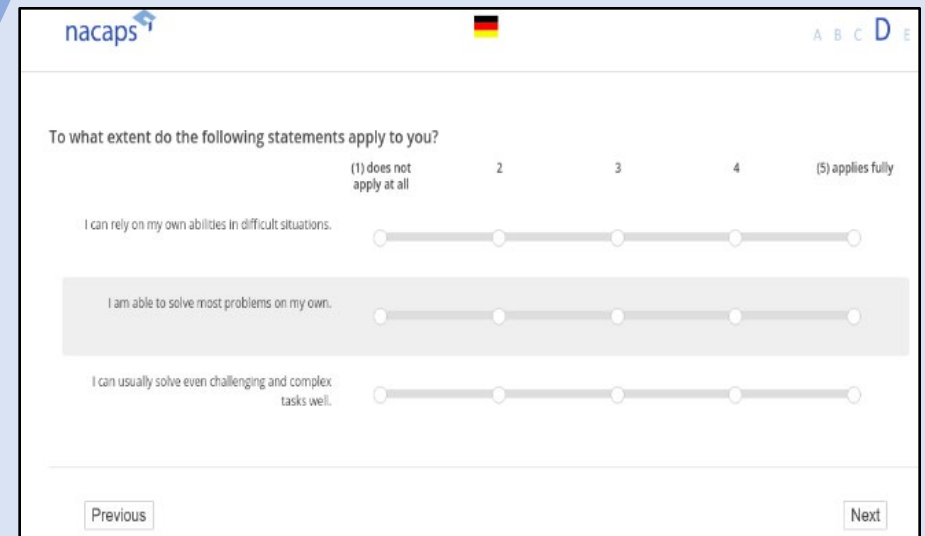


Typically require multiple indicators or measures to represent their complexity



Represent underlying psychological, emotional, or social concepts.

- Intelligence
- Job satisfaction
- Anxiety
- Motivation





## Comparison

### LATENT AND MANIFEST CONSTRUCTS:

	manifest	latent
Observation	Directly observable and measurable	Unobservable, abstract, require indirect measurement
Measurement	Measured directly with questions in surveys, or through observational techniques	Measured indirectly through multiple manifest variables (e.g. survey items, test scores)
Role in Questionnaire	Serve as indicators or observable outcomes that directly reflect aspects of a concept	Represent higher-order theoretical concepts that need to be inferred

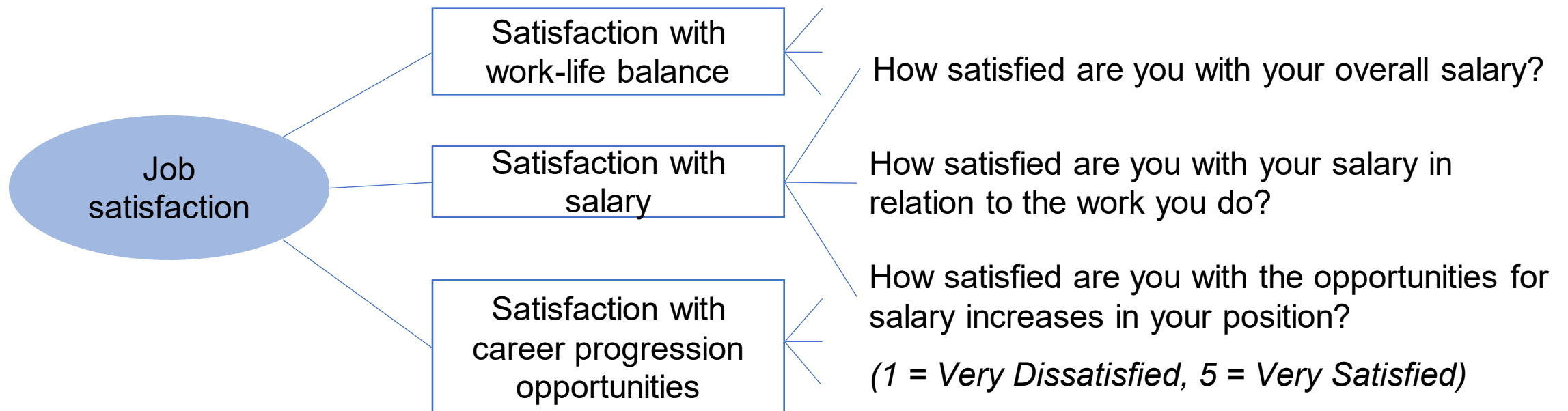
## Operationalization

Operationalization is the process of **turning abstract**, theoretical concepts (latent constructs) into measurable, **concrete variables**.

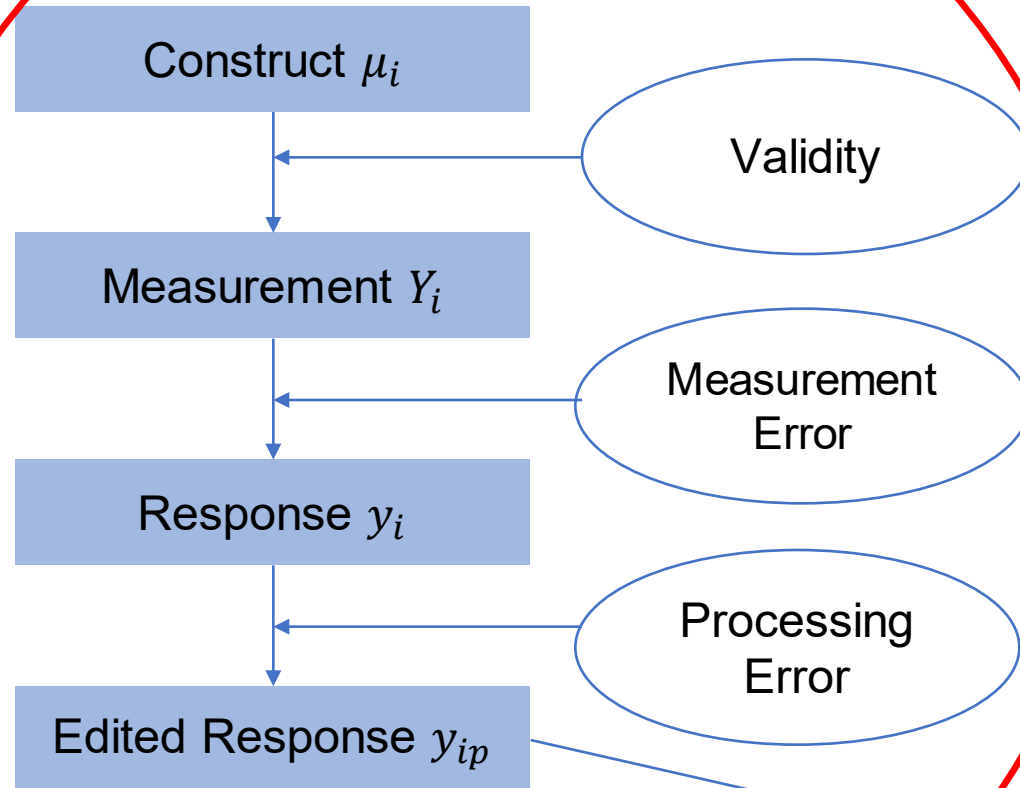
### 1. Defining the concept

### 2. Identifying indicators

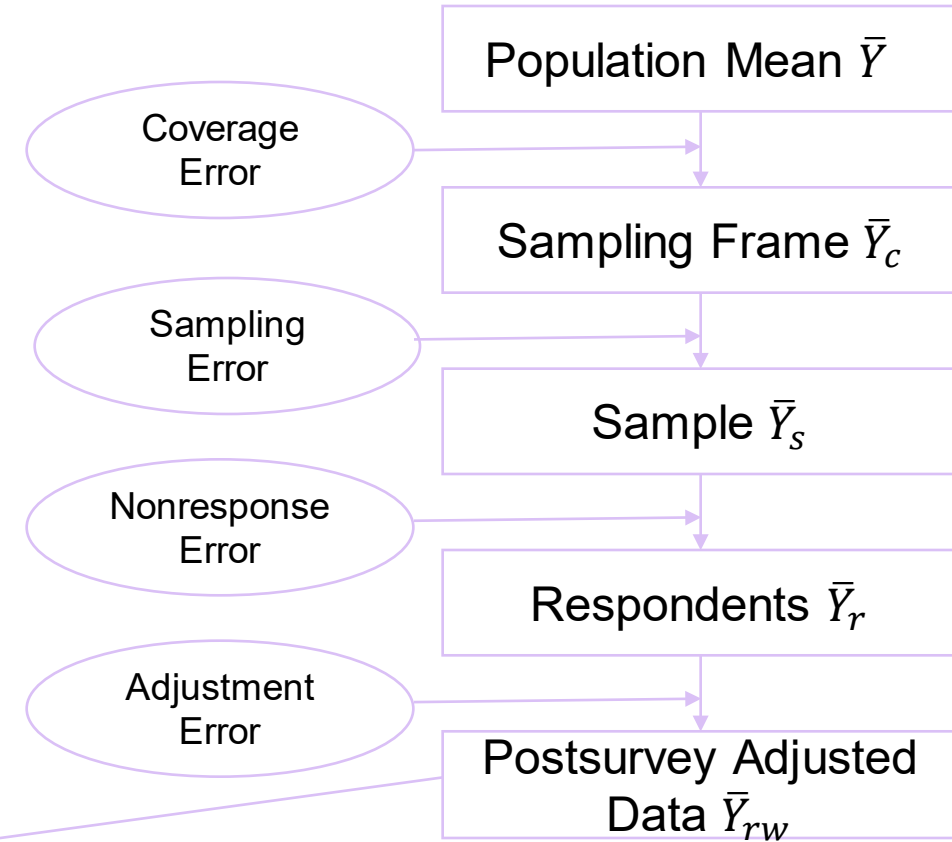
### 3. Creating variables



## Measurement



## Representation



Survey Statistic

Figure adapted from Figure 2.5 in Groves, R.; Fowler, F.; Couper, M.; Lepkowski, J.; Singer, E.; Tourangeau, R. (2009). Survey Methodology (2nd Edition). John Wiley & Sons, Inc. ISBN 0-470-46546-8



# Exercise: Identifying Levels of Measurement

## Measurements

## Measurement level and construct type

*'Socioeconomic Status' rated as low, medium, high*

Ordinal, latent

*'Reaction Time in Seconds' measured with a stopwatch*

Ratio, observable

*'Number of Hospital Visits in the Last Year'*

Ratio, observable

*'Frequency of Religious Practice' (e.g., never, occasionally, weekly, daily)*

Ordinal, latent

# Break



# **Types of Questions and Response Scales**

## Why is it important to think about it?

- determines the **kind of data** you collect, e.g. open-ended questions provide rich qualitative insights, while closed-ended questions allow for quantitative analysis
- help measure specific constructs more **accurately**
- helps **minimize bias** in the responses
- reduce respondent confusion, fatigue, and frustration, leading to **higher response rates** and more complete answers
- help define the **level of detail** or precision in the responses
- generate different types of data (e.g., nominal, ordinal, interval, or ratio), which dictate the **types of statistical analyses** that can be performed

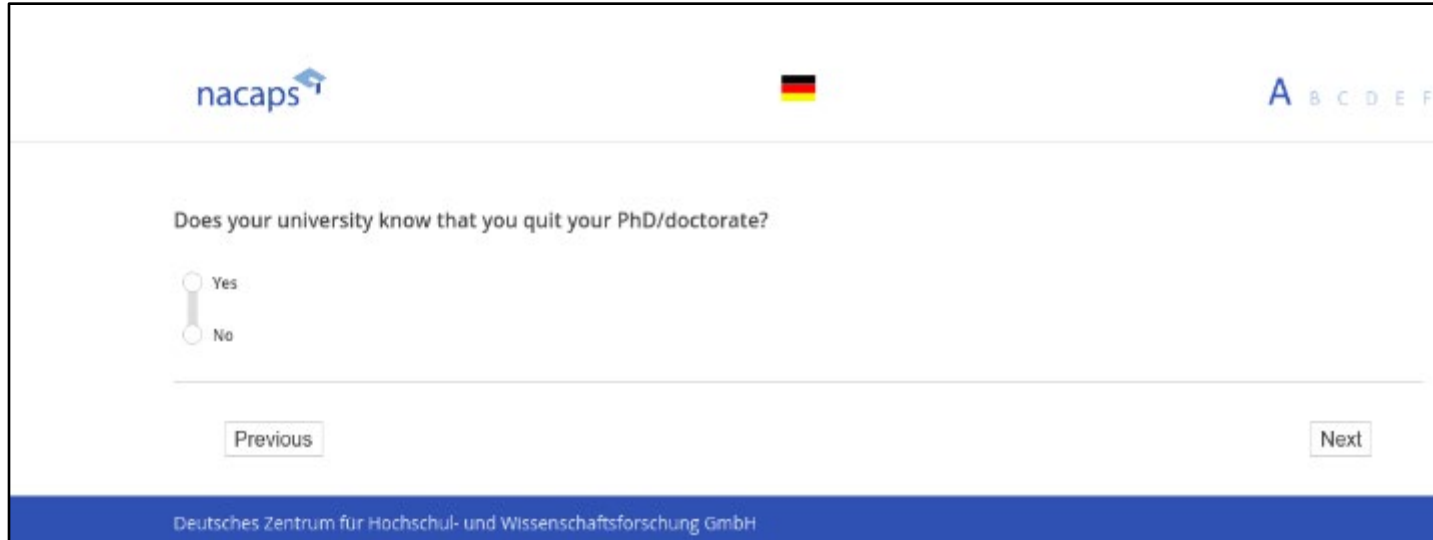


## Types of Questions

- ✓ close-ended questions
  - single-choice
  - multiple-choice
- ✓ open-ended questions
- ✓ half-open questions
- ✓ rating scales
- ✓ semantic differential
- ✓ ranking questions



## What is it?



German Centre for Higher Education Research and Science Studies (2024). National Academics Panel Study (Nacaps) 2018 - Survey 1. Data collection: 2019. Hanover: FDZ-DZHW. <https://doi.org/10.21249/DZHW:nac2018:2.0.0>. Questionnaire "Nacaps 2018. Variable Questionnaire for National Academics Panel Study 2018 (1st wave - doctoral candidates) (English)". Question A11.

### Characteristics

- written in **plain language**
- asks for a **specific** piece of information
- addresses only **one topic** or idea at a time
- predefined **response options**


### Level of measurement


Nominal or ordinal



Created by RAGIL HERU FITRIYAN  
from Noun Project

... more examples





A B C D E F

The survey is structured into six topics represented by the letters A to F.

At the beginning of December 2018 you were officially registered as a doctoral candidate at your university. Something could have changed in the meantime.

Please indicate your current status.  
*Your PhD/doctorate is regarded as completed if you have successfully passed the final examination (usually: disputation).*

☐

I am doing a PhD/doctorate.

☐

I have completed the PhD/doctorate.

☐

I have interrupted my PhD/doctoral project.

☐

I have quit my PhD/doctoral project.


This question is important for the further procedure of the survey. If you do not give a specification, you will receive questions which not apply to your current situation. Therefore, please answer this question to be able to proceed further.


Previous


Next

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German Centre for Higher Education Research and Science Studies (2024). National Academics Panel Study (Nacaps) 2018 - Survey 1. Data collection: 2019. Hanover: FDZ-DZHW. <https://doi.org/10.21249/DZHW:nac2018:2.0.0>. Questionnaire "Nacaps 2018. Variable Questionnaire for National Academics Panel Study 2018 (1st wave - doctoral candidates) (English)". Question A01.







A B C D

What is/was the size of your company (your office)?

*Please only consider the employees at the location you are/were mainly working at.  
For the self-employed: Please indicate the number of your employees, including yourself.  
If you are (currently) not employed, please refer to your last job or the job before interrupting employment.*

☐

5.000 and more employees

☐

2.500 to 4.999 employees

☐

1.000 to 2.499 employees

☐

500 to 999 employees

☐

250 to 499 employees

☐

100 to 249 employees

☐

50 to 99 employees

☐

20 to 49 employees

☐

10 to 19 employees

☐

5 to 9 employees

☐

Less than 5 employees

☐

Freelance, without employees

☐

Other, specify:

Previous

Next

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German Centre for Higher Education Research and Science Studies (2024). National Academics Panel Study (Nacaps) 2018 - Survey 4. Data collection: 2022. Hanover: FDZ-DZHW. <https://doi.org/10.21249/DZHW:nac2018:2.0.0>. Questionnaire "Nacaps 2018. Variable Questionnaire for National Academics Panel Study 2018 (4th wave - doctoral candidates) (English)". Question B20.

## Pros



- easy to **comprehend**
  - reducing confusion for respondents
  - more accurate answers
- **little cognitive** burden
  - quicker completion of surveys
  - reduced risk of survey fatigue, non-response, and drop-out
- easy to **analyse**

## When useful?

- asking **factual** information (e.g. demographic information)
- working with **diverse populations**, including those with different educational backgrounds, elderly people/children or language skills
- in **long** questionnaires
- **large-scale** surveys that need to be analysed quickly and efficiently
- **filter questions**



## Cons

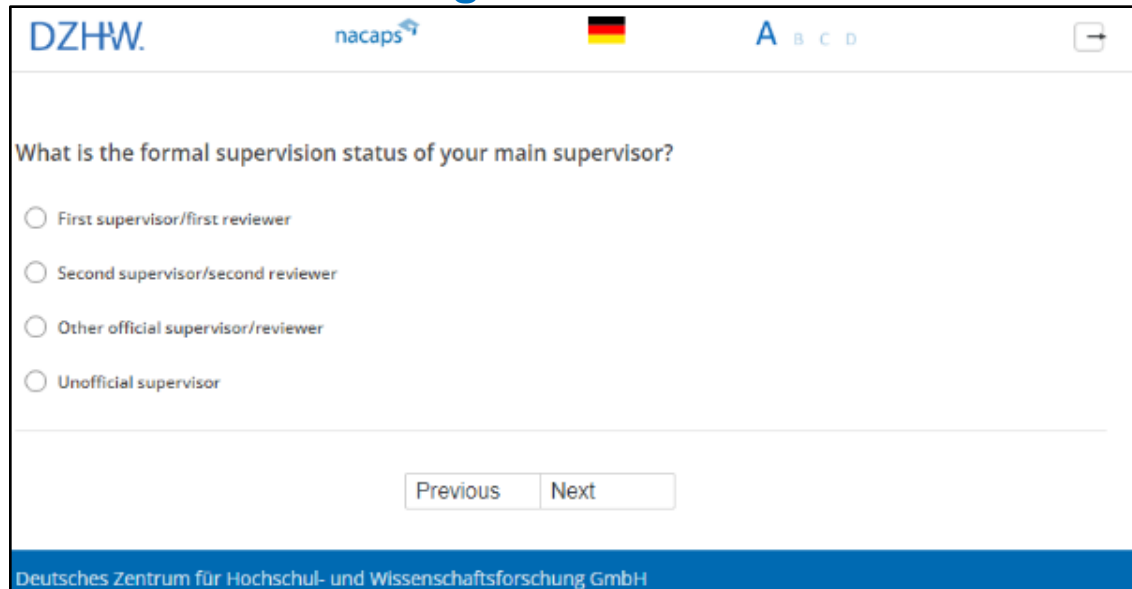
- typically do **not capture nuanced** or detailed responses
- may **oversimplify** complex issues
  - limited richness of data collected
- **restrict respondents** from giving their full or true opinion
  - Incomplete or inaccurate answers
- might feel inadequate or **boring** to respondents
  - potential risk of disengagement, non-response and drop-out


## When problematic?

- exploring **deeper insights**, motivations, or complex opinions that require explanation
- capturing **fine-grained** differences in opinions or behaviours
- dealing with topics that have **many layers** or require more than a binary or straightforward answer
- working with population that might **not fit into standardized categories**
- when you don't know all the relevant **answer categories**

## Single vs. Multiple Choice

### Single Choice



DZHW. nacaps  A B C D

What is the formal supervision status of your main supervisor?

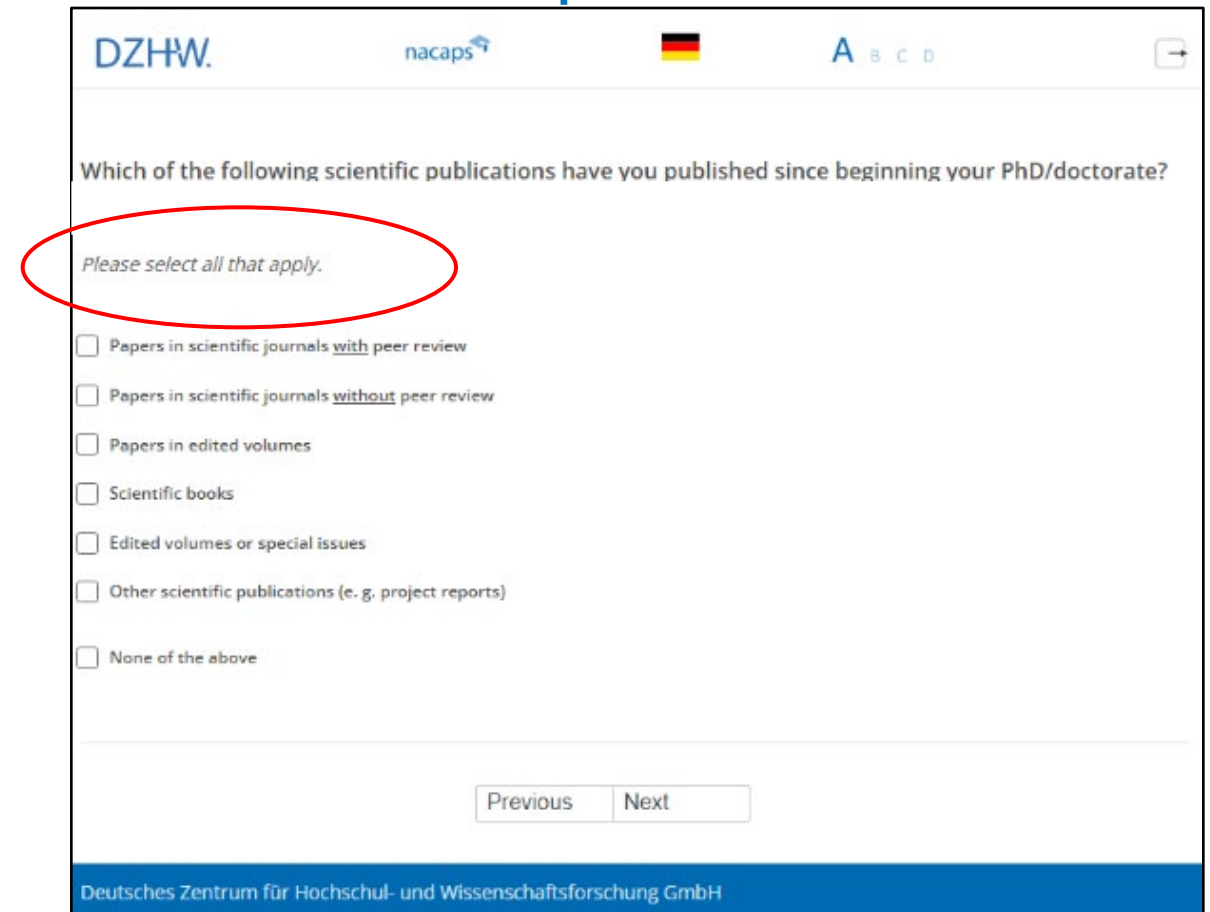
- ☐ First supervisor/first reviewer
- ☐ Second supervisor/second reviewer
- ☐ Other official supervisor/reviewer
- ☐ Unofficial supervisor


Previous Next

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German Centre for Higher Education Research and Science Studies (2024). National Academics Panel Study (Nacaps) 2018 - Survey 4. Data collection: 2022. Hanover: FDZ-DZHW. <https://doi.org/10.21249/DZHW:nac2018:2.0.0>. Questionnaire "Nacaps 2018. Variable Questionnaire for National Academics Panel Study 2018 (4th wave - doctoral candidates) (English)". Question A07.

### Multiple Choice



DZHW. nacaps  A B C D

Which of the following scientific publications have you published since beginning your PhD/doctorate?

*Please select all that apply.*

- ☐ Papers in scientific journals with peer review
- ☐ Papers in scientific journals without peer review
- ☐ Papers in edited volumes
- ☐ Scientific books
- ☐ Edited volumes or special issues
- ☐ Other scientific publications (e. g. project reports)
- ☐ None of the above

Previous Next

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German Centre for Higher Education Research and Science Studies (2024). National Academics Panel Study (Nacaps) 2018 - Survey 4. Data collection: 2022. Hanover: FDZ-DZHW. <https://doi.org/10.21249/DZHW:nac2018:2.0.0>. Questionnaire "Nacaps 2018. Variable Questionnaire for National Academics Panel Study 2018 (4th wave - doctoral candidates) (English)". Question A49.

## What is it?

### Single Choice

A question where respondents can choose only one answer from a list of predefined options.

- one numerical/ordinal variable
- online surveys: use of radio buttons



Created by RAGIL HERU FITRIYAN  
from Noun Project

What is the formal supervisor?

☐ First supervisor/first reviewer

☐ Second supervisor/second reviewer

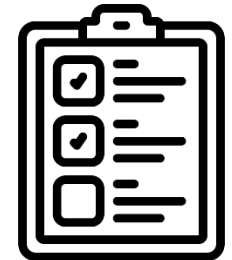
☐ Other official supervisor

☐ Unofficial supervisor

### Multiple Choice

A question where respondents can select more than one answer from a list of predefined options.

- one dummy variable (0/1) for each answer category
- online surveys: use of checkboxes



Created by Juicy Fish  
from Noun Project

Please select all that apply.

☐ Papers in scientific journals

☐ Papers in scientific journals

☐ Papers in edited volumes

☐ Scientific books

☐ Edited volumes or special issues

☐ Other scientific publications

☐ None of the above

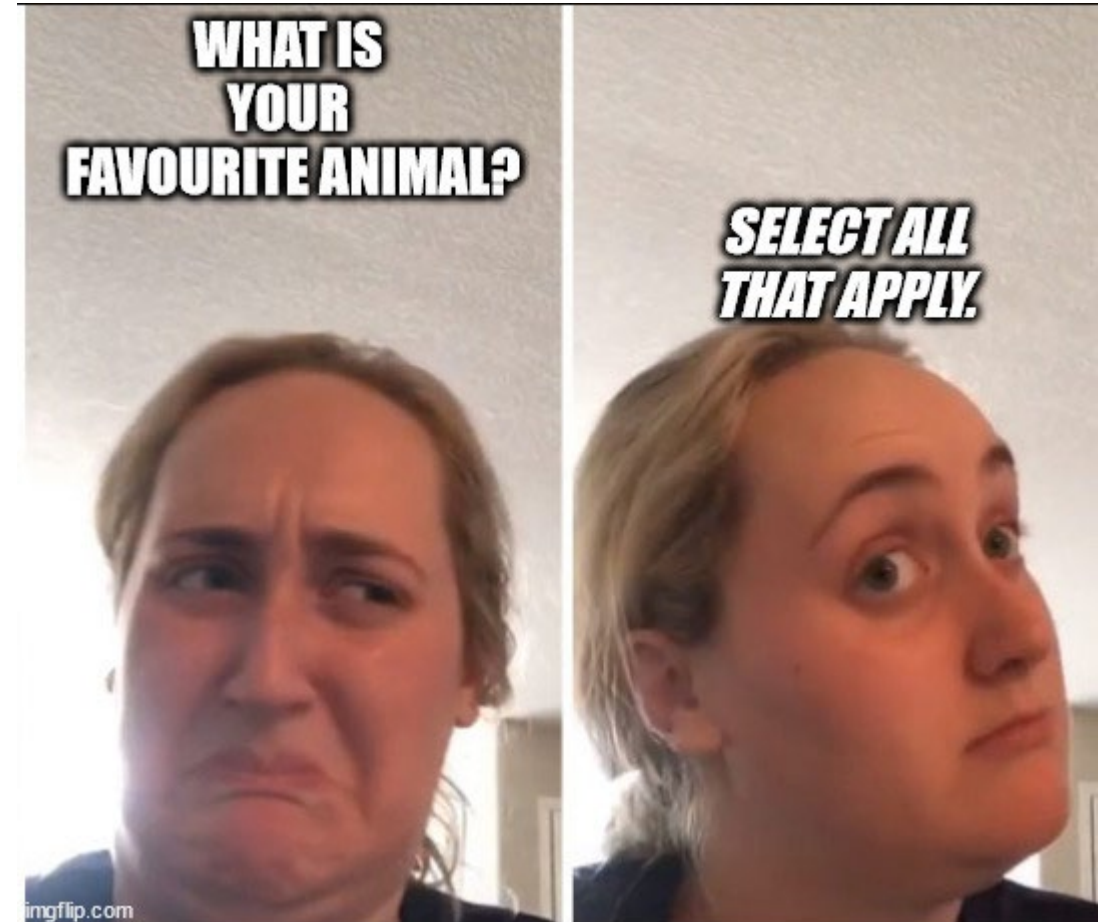
## When to use?

### Single Choice

- when answer categories are mutually **exclusive** and distinct
- to identify the **most** important, primary, or dominant characteristic, behaviour, or opinion

### Multiple Choice

- when multiple answers can **coexist** and/or are not distinct
- to gather a **complete set of actions**, preferences, or opinions that may not fit into a single category



Meme based on the "Kombucha Girl" reaction video featuring Brittany Broski. Meme created via imgflip.com (accessed June 25, 2025).



## What is it?



The screenshot shows the Nacaps 2018 survey interface. At the top, there is a header with the 'nacaps' logo, a German flag, and a language selector set to 'A'. Below the header, the question 'For what reasons did you quit your PhD/doctoral project?' is displayed. A large, empty text box is provided for the respondent's answer. At the bottom of the question area, there are 'Previous' and 'Next' buttons. The footer of the interface reads 'Deutsches Zentrum für Hochschul- und Wissenschaftsforschung GmbH'.

German Centre for Higher Education Research and Science Studies (2024). National Academics Panel Study (Nacaps) 2018 - Survey 1. Data collection: 2019. Hanover: FDZ-DZHW. <https://doi.org/10.21249/DZHW:nac2018:2.0.0>. Questionnaire "Nacaps 2018. Variable Questionnaire for National Academics Panel Study 2018 (1st wave - doctoral candidates) (English)". Question A03.

### Characteristics

- allow respondents to answer in **their own words**
- providing **as much or as little detail** as they choose


### Level of measurement

Nominal, metric, interval or ratio

## ... more examples

DZHW.

nacaps



A B C D

In which discipline did you complete your PhD/doctorate?

Please provide a discipline description that is as accurate as possible.

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German Centre for Higher Education Research and Science Studies (2024). National Academics Panel Study (Nacaps) 2018 - Survey 4. Data collection: 2022. Hanover: FDZ-DZHW. <https://doi.org/10.21249/DZHW:nac2018:2.0.0>. Questionnaire "Nacaps 2018. Variable Questionnaire for National Academics Panel Study 2018 (4th wave - doctoral candidates) (English)". Question A35.

DZHW.

nacaps



A B C D



Please think about your mental well-being – this also includes stress, depression or your overall mood.  
On how many days during the last four weeks did you not feel mentally well?

Please enter numbers only and dispense of decimal places.

day(s)

Previous

Next

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German Centre for Higher Education Research and Science Studies (2024). National Academics Panel Study (Nacaps) 2018 - Survey 4. Data collection: 2022. Hanover: FDZ-DZHW. <https://doi.org/10.21249/DZHW:nac2018:2.0.0>. Questionnaire "Nacaps 2018. Variable Questionnaire for National Academics Panel Study 2018 (4th wave - doctoral candidates) (English)". Question C11.  
Instrument adopted from Center for Disease Control and Prevention (2000). Measuring Healthy Days. Atlanta, Georgia: CDC,

## Pros



- more **nuanced**, in-depth answers
- allows to **express themselves** without being influenced by predefined response options
  - more honest answers
- may introduce **new ideas** or perspectives that researchers hadn't considered

## When useful?

- explore **new ideas** or understand complex behaviours and motivations (explorative research)
- gather **rich**, detailed feedback or narratives
- when there is a **large number** of possible answer options
- very **emotional** topics
- **Creating closed questions**

## Cons

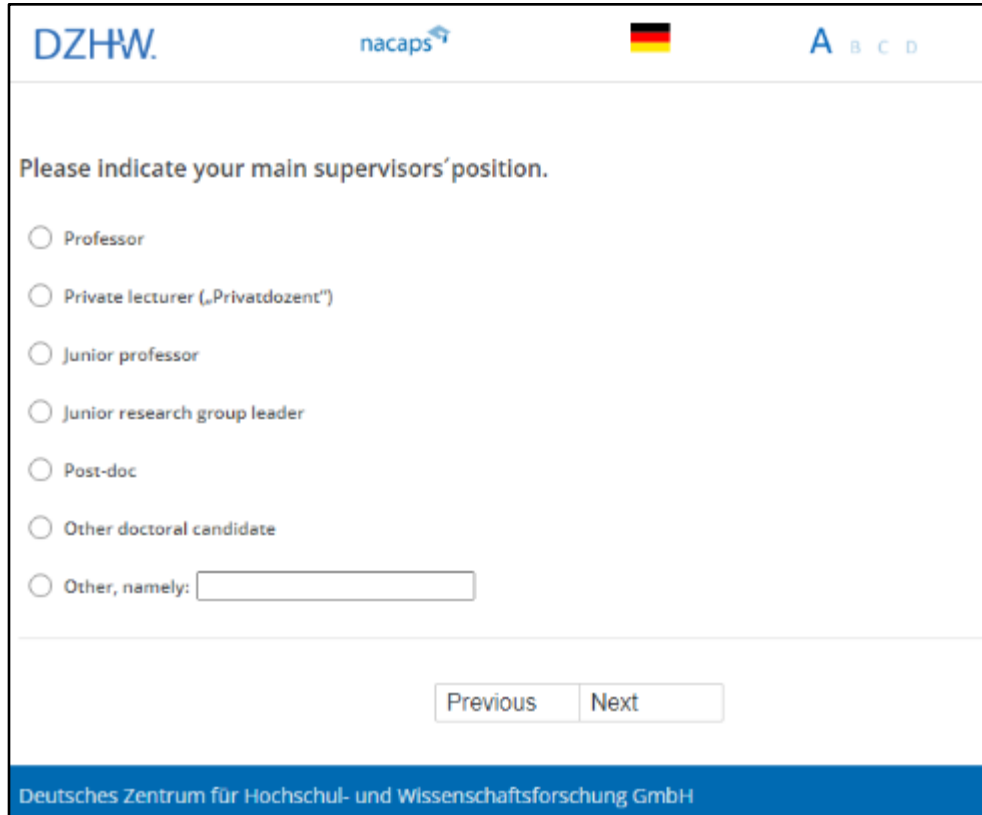
- might provide very short, incomplete, or vague answers
  - varying data quality
  - subject to bias
- time consuming
- high cognitive burden
  - potential risk of disengagement, non-response and drop-out
- requires coding, categorization, or cleaning
  - subjective
  - resource-intensive

## When problematic?

- difficult to generalize findings or compare them across respondents or groups
- challenging in cross-cultural or multilingual contexts
- Large scale surveys



## What is it?



DZHW. nacaps  A B C D

Please indicate your main supervisors' position.

☐ Professor

☐ Private lecturer („Privatdozent“)

☐ Junior professor

☐ Junior research group leader

☐ Post-doc

☐ Other doctoral candidate

☐ Other, namely:

Deutsches Zentrum für Hochschul- und Wissenschaftsforschung GmbH

German Centre for Higher Education Research and Science Studies (2024). National Academics Panel Study (Nacaps) 2018 - Survey 4. Data collection: 2022. Hanover: FDZ-DZHW.  
<https://doi.org/10.21249/DZHW:nac2018:2.0.0>. Questionnaire "Nacaps 2018. Variable Questionnaire for National Academics Panel Study 2018 (4th wave - doctoral candidates) (English)". Question A08.

## Characteristics

- offered a **set of predefined answers** but respondents can (optionally) write in their **own response** if none of the choices fit
- **hybrid** between closed and open-ended question
- works with **single-** and **multiple** answer

## Level of measurement

Nominal, ordinal, interval or ratio

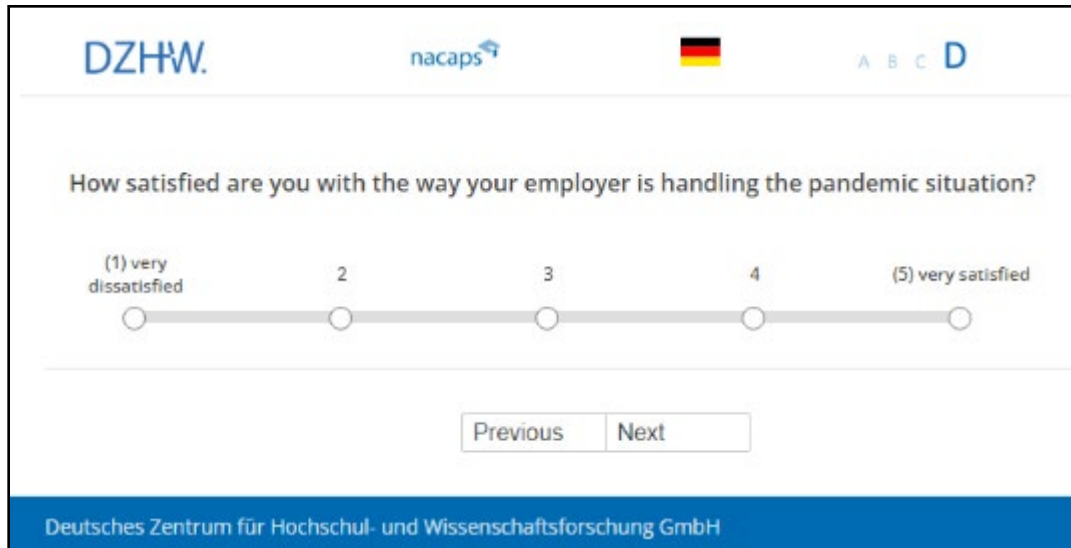
## When to use?

- when you anticipate additional answers
- to ensure flexibility
- to reduce cognitive load
- to maintain the ease of preprocessing closed-ended questions but also gather potentially valuable insights



Meme based on the "Trade Offer" format, originating from a TikTok video by Josh Swain (@itsjojosiwa, 2021). Meme created using imgflip.com (accessed June 25, 2025).

## What is it?



German Centre for Higher Education Research and Science Studies (2024). National Academics Panel Study (Nacaps) 2018 - Survey 4. Data collection: 2022. Hanover: FDZ-DZHW. <https://doi.org/10.21249/DZHW:nac2018:2.0.0>. Questionnaire "Nacaps 2018. Variable Questionnaire for National Academics Panel Study 2018 (4th wave - doctoral candidates) (English)". Question D04.

Instrument adapted from Delgado-Osorio, X., Gierke, M., Jaen, J., Kansime, J., Lonken, D., Pérez-Bosch Quesada, E., Ramachandran, K., Rizzi, T. & Saxena, P. (2023). Being a Doctoral Researcher in the Leibniz Association: 2021 Leibniz PhD Network Survey Report, <https://www.ssoar.info/ssoar/handle/document/89848>


## Characteristics

- any question format (or statement) where respondents are asked to **evaluate something along a continuum**
- can have various formats, including numeric scales, graphic scales, or descriptive labels

## Level of measurement

Ordinal or interval

## ... more examples

DZHW. nacaps  A B C D

How much have you personally been affected by each of the following as a result of the Corona crisis since March 2020 to date?

(1) not at all 2 3 4 (5) very strongly

Restriction of your standard of living ☐ ☐ ☐ ☐ ☐

Money problems ☐ ☐ ☐ ☐ ☐

Illness of people close to you ☐ ☐ ☐ ☐ ☐

Conflicts in the family ☐ ☐ ☐ ☐ ☐

Loneliness ☐ ☐ ☐ ☐ ☐


Care bottlenecks for children or relatives in need of care ☐ ☐ ☐ ☐ ☐

School problems of your children ☐ ☐ ☐ ☐ ☐

Problems in reconciling family and work ☐ ☐ ☐ ☐ ☐

Previous Next

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DZHW. nacaps  A B C D

To what extent do the following statements apply to you?

(1) does not apply at all 2 3 4 (5) applies fully

I can rely on my own abilities in difficult situations. ☐ ☐ ☐ ☐ ☐

I am able to solve most problems on my own. ☐ ☐ ☐ ☐ ☐

I can usually solve even challenging and complex tasks well. ☐ ☐ ☐ ☐ ☐

Previous Next

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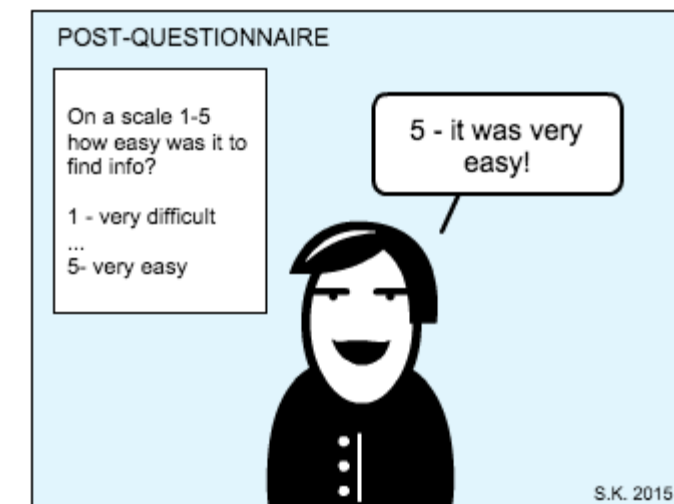
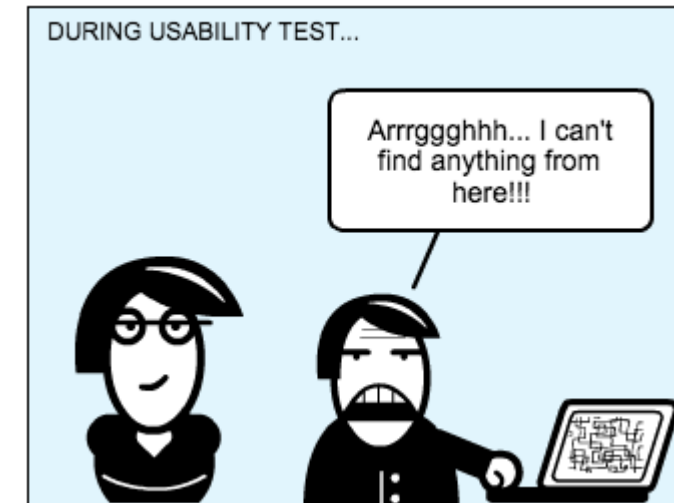
German Centre for Higher Education Research and Science Studies (2024). National Academics Panel Study (Nacaps) 2018 - Survey 4. Data collection: 2022. Hanover: FDZ-DZHW. <https://doi.org/10.21249/DZHW:nac2018:2.0.0>. Questionnaire "Nacaps 2018. Variable Questionnaire for National Academics Panel Study 2018 (4th wave - doctoral candidates) (English)". Questions D05 & C18.

Instruments adopted from FDZ-LIfBi (2020). Startkohorten 2-6. NEPS Corona und Bildung. Zusatzerhebung Mai 2020. Programmiervorlage CAWI, S. 62-64. [https://www.neps-data.de/Portals/0/NEPS/Datenzentrum/Forschungsdaten/NEPS-C/NEPS-C\\_Q.zip](https://www.neps-data.de/Portals/0/NEPS/Datenzentrum/Forschungsdaten/NEPS-C/NEPS-C_Q.zip) and Beierlein, C., Kovaleva, A., Kemper, C. J., & Rammstedt, B. (2014). Allgemeine Selbstwirksamkeit Kurzskala (ASKU). Zusammenstellung sozialwissenschaftlicher Items und Skalen (ZIS). <https://doi.org/10.6102/zis35>



## When useful?

- to measure attitudes, feelings, perceptions, or opinions
- to measure intensity, frequency or likelihood
- to measure multiple aspects of a concept (e.g. satisfaction with different job aspects)
- to measure a latent construct (e.g. self-efficacy)
- for group comparisons
- generate data that can be analyzed quantitatively (e.g., mean scores, frequency of agreement)



## How to use it

- a **neutral** midpoint?
- an **equal number of positive and negative options** (most commonly 5 or 7 options), depending on how nuanced you need it
- include scale **labelling** (min. end-point labels)?
- scale should **match** question/statement
- use **same set** of response options (e.g., "Strongly agree," "Agree," etc.) to assess different aspects of the same topic
- do not switch/change the **scale direction** along questionnaire (most commonly negative – positive)
- provide **additional 'N/A'** category when necessary?
- **avoid very long** item sets



Image of a screenshot from Who Wants to Be a Millionaire? (ABC/Disney). Originally posted by @zannah on Twitter (retrieved June 25, 2025)

## What is it?

### Characteristics

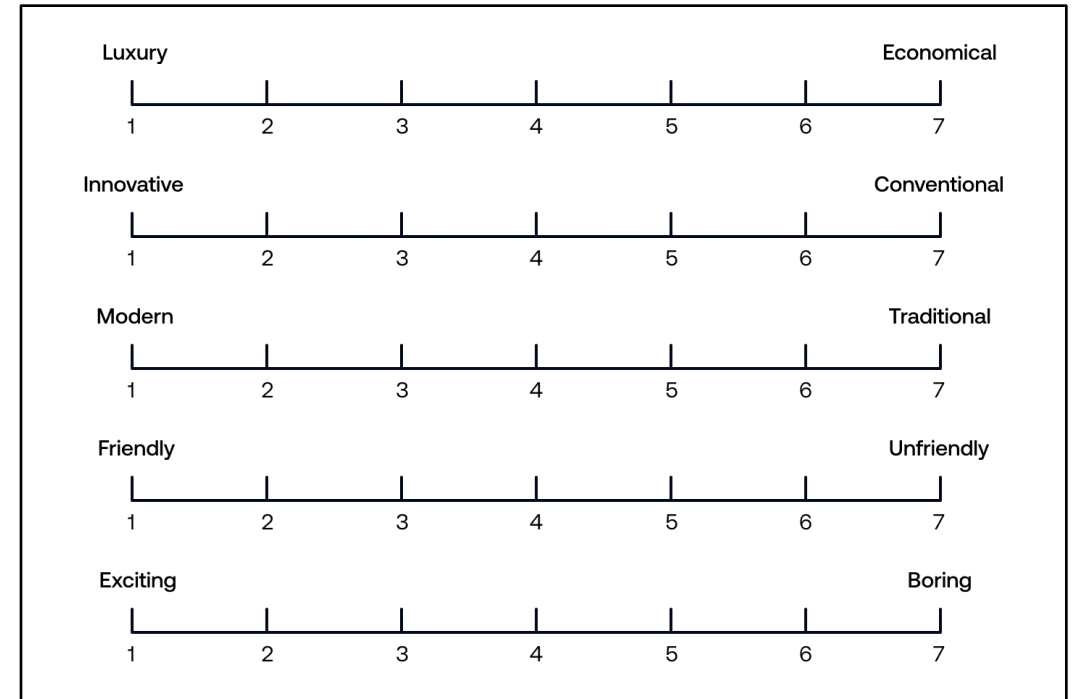
Asks respondents to **rate** a concept, object, or idea on a scale between **two opposite** adjectives or phrases (e.g., "good" vs. "bad," "strong" vs. "weak")

### Level of measurement

Ordinal

## When useful?

Best for capturing perceptions across **multiple dimensions**



Appinio. (n.d.). Semantic differential scale: Definition, advantages & examples. Retrieved from <https://www.appinio.com/en/blog/market-research/semantic-differential-scale> (retrieved June 25, 2025)

## What is it?

### Characteristics

- ask respondents to compare a list of items by **ordering them** according to preference, importance, or relevance
- each item is **ranked in relation to the others**

### Level of measurement

Ordinal or interval

## When useful?

Useful when you need to know **which items matter most** compared to others

1. Please rank your favourite colors \*

⋮

 Red

⋮

 Blue

⋮

 Green

⋮

 Yellow

⋮

 Orange

⋮

 Purple

Next ✓

Blocksurvey. (n.d.). Ranking Questions 101: A Complete Guide. Retrieved from <https://blocksurvey.io/features/ranking-questions-101> (retrieved June 25, 2025)

# Exercise: Matching Research Objectives with Question Types

## Objectives

Rank preferred social media platforms

Evaluate perceptions of product quality

Understand motivations for voting in local elections

Measure acceptance of renewable energy technologies in urban areas.

Understand factors influencing community involvement or volunteerism.

Determine preferred features in smart home devices.

Inquiring marital status

Gauge attitudes toward vaccination in different age groups.

## Types of questions

- ✓ Closed question, single-choice
- ✗ Closed question, multiple-choice
- Open question
- ♥ Rating question
- ★ Semantic differential
- Ⓢ Ranking question



# Questionnaire Structure and Layout

## Why is it important to think about it?

- minimizes confusion and ensures that respondents understand the questions, leading to **more accurate** and **reliable** answers.
- it encourages respondents to **complete** the questionnaire
- poorly ordered questions can **prime** respondents, causing them to answer later questions in a **biased** way
- it is more enjoyable to complete, leaving a **positive impression** on respondents
- simplifies **data cleaning**, **analysis** and **interpretation** for researchers
- improve **accessibility** for a wider range of respondents, including those with disabilities

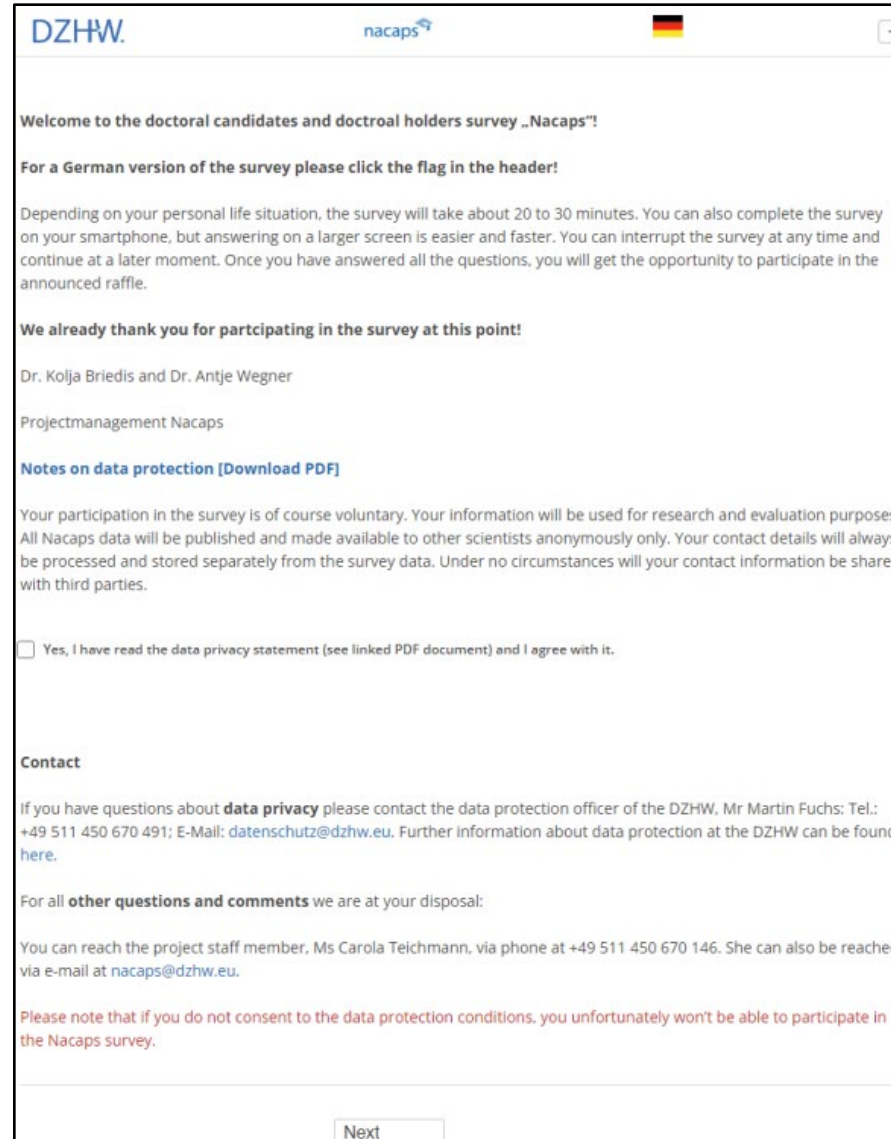
## General recommended structure

### Introduction




- Greeting
- Language
- Information about your study
  - Researcher and institution
  - Purpose
  - Sponsor
- Estimated duration
- Incentives
- Thank you
- Informed consent
- Contact details

## Introduction



The screenshot shows the introduction page of the Nacaps survey. At the top, there are logos for DZHW, nacaps, and a German flag. The text welcomes participants to the survey and provides instructions on how to proceed. It mentions that the survey will take about 20 to 30 minutes and can be completed on a smartphone or a larger screen. It also states that participants can interrupt the survey at any time and continue later. A note of thanks is given for participation. The contact information for the project management team is provided, including Dr. Kolja Briedis and Dr. Antje Wegner. A link to the data protection statement is included. A checkbox is present for participants to confirm they have read and agree with the data privacy statement. The contact section provides details for the data protection officer, Mr. Martin Fuchs, and the project staff member, Ms. Carola Teichmann. A final note states that participants who do not consent to the data protection conditions will not be able to participate in the survey. A 'Next' button is located at the bottom right.

DZHW. nacaps 

Welcome to the doctoral candidates and doctoral holders survey „Nacaps“!

For a German version of the survey please click the flag in the header!

Depending on your personal life situation, the survey will take about 20 to 30 minutes. You can also complete the survey on your smartphone, but answering on a larger screen is easier and faster. You can interrupt the survey at any time and continue at a later moment. Once you have answered all the questions, you will get the opportunity to participate in the announced raffle.

We already thank you for participating in the survey at this point!

Dr. Kolja Briedis and Dr. Antje Wegner

Projectmanagement Nacaps

[Notes on data protection \[Download PDF\]](#)

Your participation in the survey is of course voluntary. Your information will be used for research and evaluation purposes. All Nacaps data will be published and made available to other scientists anonymously only. Your contact details will always be processed and stored separately from the survey data. Under no circumstances will your contact information be shared with third parties.

☐ Yes, I have read the data privacy statement (see linked PDF document) and I agree with it.

**Contact**

If you have questions about **data privacy** please contact the data protection officer of the DZHW, Mr Martin Fuchs: Tel.: +49 511 450 670 491; E-Mail: [datenschutz@dzhw.eu](mailto:datenschutz@dzhw.eu). Further information about data protection at the DZHW can be found [here](#).

For all **other questions and comments** we are at your disposal:

You can reach the project staff member, Ms Carola Teichmann, via phone at +49 511 450 670 146. She can also be reached via e-mail at [nacaps@dzhw.eu](mailto:nacaps@dzhw.eu).

Please note that if you do not consent to the data protection conditions, you unfortunately won't be able to participate in the Nacaps survey.

Next

## General recommended structure

### Introduction



- Greeting
- Language
- Information about your study
  - Researcher and institution
  - Purpose
  - Sponsor
- Estimated duration
- Incentives
- Thank you
- Informed consent
- Contact details

### Instruction



Created by Aqua-Juniata  
from Noun Project


- how to answer the questions
  - optional/ required questions
- how to administer the questionnaire
  - recommended devices



## Instructions

DZHW.

nacaps



For the best interview experience, rotate the display to answer some questions.

Previous

Next

Deutsches Zentrum für Hochschul- und Wissenschaftsforschung GmbH

German Centre for Higher Education Research and Science Studies (2024). National Academics Panel Study (Nacaps) 2018 - Survey 4. Data collection: 2022. Hanover: FDZ-DZHW. <https://doi.org/10.21249/DZHW:nac2018:2.0.0>. Questionnaire "Nacaps 2018. Variable Questionnaire for National Academics Panel Study 2018 (4th wave - doctoral candidates) (English)". Question offer.



Nationwide survey of the study conditions and professional development of students who have completed their doctorates during the 2013/14 graduation year



INSTRUCTIONS FOR FILLING OUT THE QUESTIONNAIRE

Please answer every question. You will generally answer by checking a box or entering a number.

>> Proceed to question 3.8 means: If a specific question does not apply to your situation, you will be directed to the next question.

1.2 means: Please choose only one response.  
☐

1.8 means: Please check the applicable number, e.g.:  
☐ 1 ☒ 2 ☐ 3 ☐ 4 ☐ 5

3.8 means: Multiple responses are possible, please check all applicable responses.  
☒ ☒

1.6 means: Please enter the appropriate text and/or number (right-justified), e.g.:

If you don't have enough space for your answers, please add an additional piece of paper or use the back of the questionnaire.

German Centre for Higher Education Research and Science Studies (2024). DZHW PhD Panel 2014 - Survey 1. Data collection: 2015. Hanover: FDZ-DZHW.10.21249/DZHW:phd2014:4.0.0. Questionnaire "Karrieren Promovierter" (1st wave - English). Cover page.

67

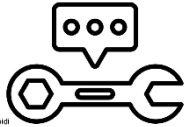
## General recommended structure

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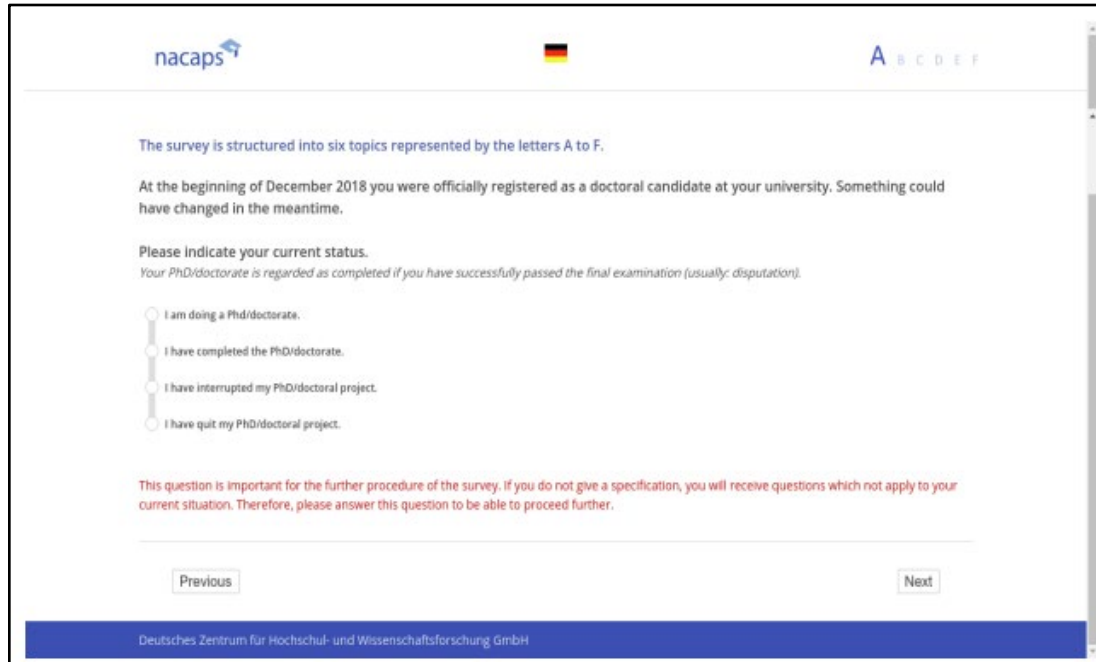
### study related questions



Created by Aqua-Juniat  
from Novus Project

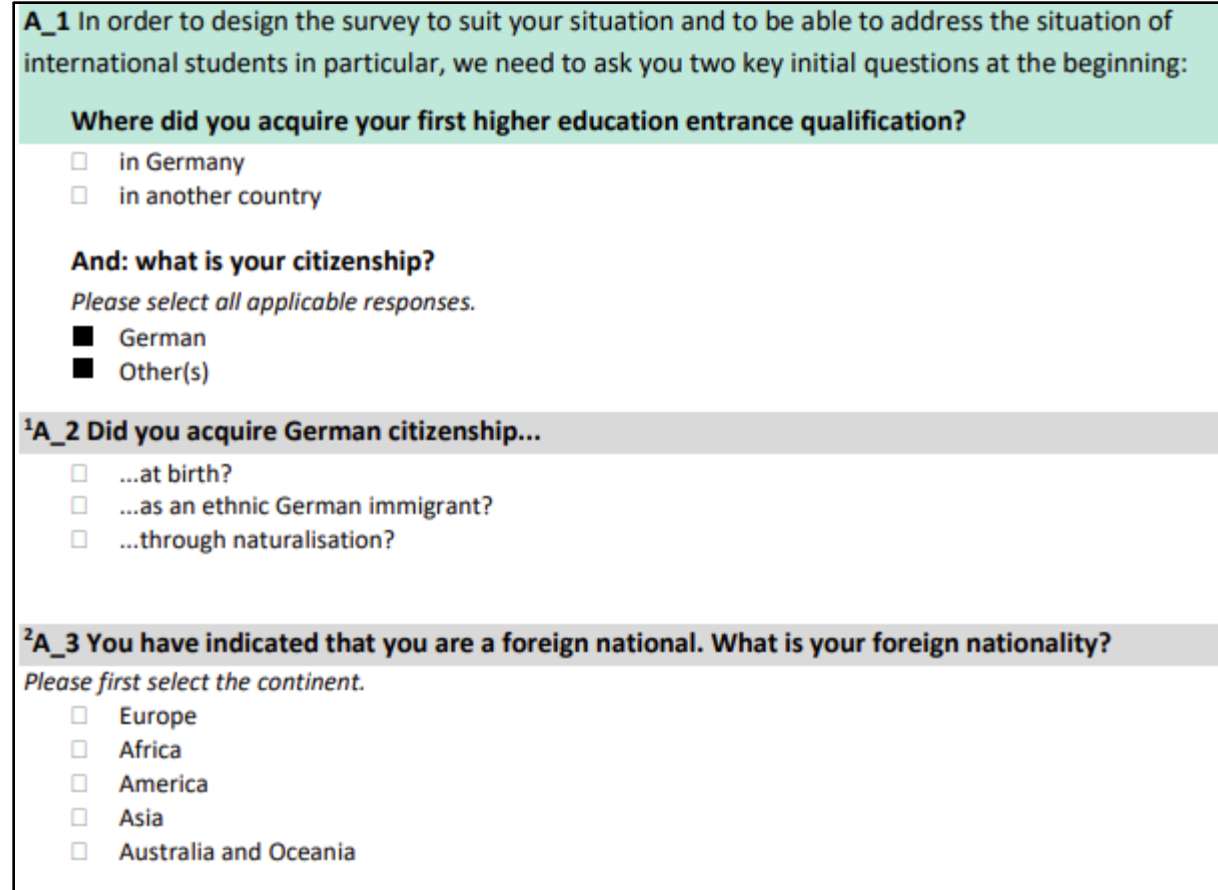
- Screening/filter questions
- thematic question blocks

## Screening/filter questions



The screenshot shows the introduction page of the Nacaps 2018 questionnaire. It features the 'nacaps' logo, a German flag, and a progress indicator with letters A through F. The text explains that the survey is structured into six topics (A to F) and that participants were registered as doctoral candidates in December 2018. It asks participants to indicate their current status regarding their PhD/doctorate. Four radio button options are provided: 'I am doing a PhD/doctorate', 'I have completed the PhD/doctorate', 'I have interrupted my PhD/doctoral project', and 'I have quit my PhD/doctoral project'. A red note states that this question is important for the survey procedure. At the bottom, there are 'Previous' and 'Next' buttons and the footer 'Deutsches Zentrum für Hochschul- und Wissenschaftsforschung GmbH'.

German Centre for Higher Education Research and Science Studies (2024). National Academics Panel Study (Nacaps) 2018 - Survey 1. Data collection: 2019. Hanover: FDZ-DZHW. <https://doi.org/10.21249/DZHW:nac2018:2.0.0>. Questionnaire "Nacaps 2018. Variable Questionnaire for National Academics Panel Study 2018 (1st wave - doctoral candidates) (English)". Question A01.



The screenshot displays three screening questions from the Nacaps 2018 questionnaire. Question A\_1 asks where the respondent acquired their first higher education entrance qualification, with options 'in Germany' and 'in another country'. It also asks for citizenship, with options 'German' and 'Other(s)', and instructs to select all applicable responses. Question A\_2 asks if the respondent acquired German citizenship, with options '...at birth?', '...as an ethnic German immigrant?', and '...through naturalisation?'. Question A\_3 asks for foreign nationality, with options 'Europe', 'Africa', 'America', 'Asia', and 'Australia and Oceania'. Each question is preceded by a heading and a brief instruction.

German Centre for Higher Education Research and Science Studies (2024). The Student Survey Germany 2021. Data collection: 2021. Hanover: FDZ-DZHW. <https://doi.org/10.21249/DZHW:sid2021:1.0.1>. Questionnaire "Variable Questionnaire for The Student Survey Germany (English)". Questions A1-A3. <https://doi.org/10.21249/DZHW:sid2021-ins1-att1:1.0.0>

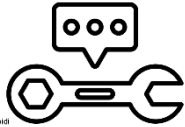
## General recommended structure

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from Noun Project

- how to answer the questions
  - optional/ required questions
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  - recommended devices

### study related questions



Created by WaterShower  
from Noun Project

- Screening/filter questions
- thematic question blocks

### Socio-demographics control variables



Created by Tobi Ahn  
from Noun Project

Block for socio-demographics and control variables

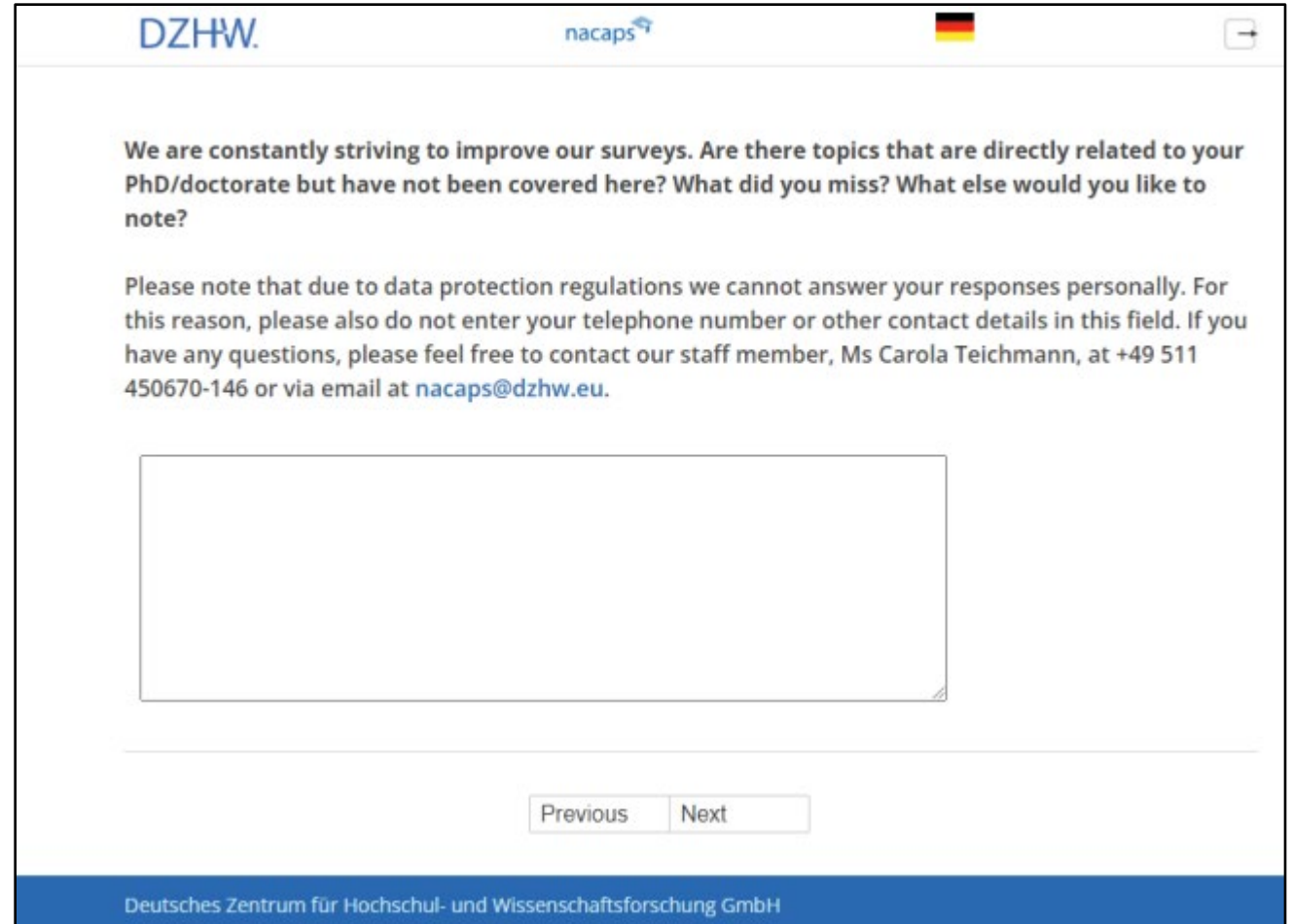
### Feedback




Created by Lucian Dima 9P  
from Noun Project

- Room for feedback
  - Comments
  - additional information
  - criticism

## Feedback



DZHW. nacaps 

We are constantly striving to improve our surveys. Are there topics that are directly related to your PhD/doctorate but have not been covered here? What did you miss? What else would you like to note?

Please note that due to data protection regulations we cannot answer your responses personally. For this reason, please also do not enter your telephone number or other contact details in this field. If you have any questions, please feel free to contact our staff member, Ms Carola Teichmann, at +49 511 450670-146 or via email at [nacaps@dzhw.eu](mailto:nacaps@dzhw.eu).

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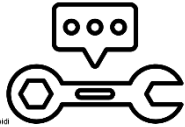
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### Instruction



Created by Aqua-Juniatd from Noun Project

- how to answer the questions
  - optional/ required questions
- how to administer the questionnaire
  - recommended devices

### study related questions



Created by Walelame from Noun Project

- Screening/filter questions
- thematic question blocks

### Socio-demographics control variables



Created by Lila-Dim 9P from Noun Project

Block for socio-demographics and control variables

### Feedback



Created by Lila-Dim 9P from Noun Project

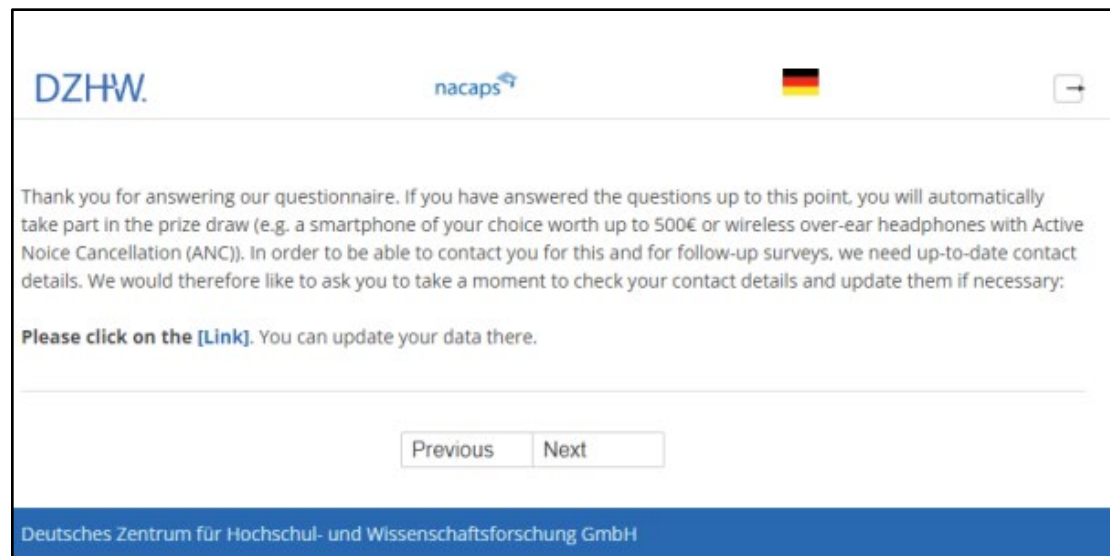
- Room for feedback
  - Comments
  - additional information
  - criticism

### Farewell

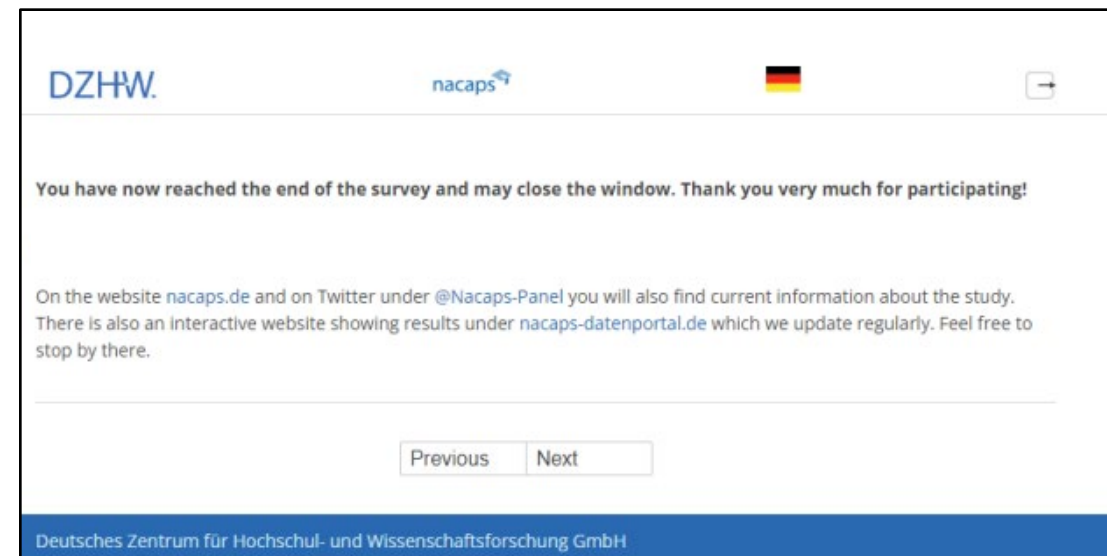


- Thank you
- Incentive
- Contact details
- Follow-up details
- Farewell

## Farewell



The screenshot shows the 'Farewell' screen of the questionnaire. At the top, there are logos for DZHW, nacaps, and the German flag, along with a back arrow icon. The main text reads: 'Thank you for answering our questionnaire. If you have answered the questions up to this point, you will automatically take part in the prize draw (e.g. a smartphone of your choice worth up to 500€ or wireless over-ear headphones with Active Noise Cancellation (ANC)). In order to be able to contact you for this and for follow-up surveys, we need up-to-date contact details. We would therefore like to ask you to take a moment to check your contact details and update them if necessary: Please click on the [Link]. You can update your data there.' Below the text is a horizontal line. At the bottom, there are two buttons: 'Previous' and 'Next'. The footer contains the text 'Deutsches Zentrum für Hochschul- und Wissenschaftsforschung GmbH'.




The screenshot shows the 'Farewell' screen of the questionnaire. At the top, there are logos for DZHW, nacaps, and the German flag, along with a back arrow icon. The main text reads: 'You have now reached the end of the survey and may close the window. Thank you very much for participating!'. Below this, it says: 'On the website [nacaps.de](https://nacaps.de) and on Twitter under [@Nacaps-Panel](https://twitter.com/Nacaps-Panel) you will also find current information about the study. There is also an interactive website showing results under [nacaps-datenportal.de](https://nacaps-datenportal.de) which we update regularly. Feel free to stop by there.' Below the text is a horizontal line. At the bottom, there are two buttons: 'Previous' and 'Next'. The footer contains the text 'Deutsches Zentrum für Hochschul- und Wissenschaftsforschung GmbH'.

German Centre for Higher Education Research and Science Studies (2024). National Academics Panel Study (Nacaps) 2018 - Survey 4. Data collection: 2022. Hanover: FDZ-DZHW. <https://doi.org/10.21249/DZHW:nac2018:2.0.0>. Questionnaire "Nacaps 2018. Variable Questionnaire for National Academics Panel Study 2018 (4th wave - doctoral candidates) (English)". Question E01 & E03.

## Logical flow of questions

- **Group related questions** and avoid jumps in topics
  - ✓ helps respondents focus on each question
  - ✓ easier for respondents to follow and answer each question in context
- Use **filter questions**
  - ✓ respondents get only relevant questions

**DISCLAIMER:** The more extensive and complex the filtering, the more time-consuming the data processing
- Start with **easy questions** or catchy **icebreaker**
  - ✓ respondents stay motivated
- **Move from general** to more specific questions

**1.1**  
  
X

**You have recently successfully completed your doctorate. This must have involved clearing a number of hurdles along the way. We would like to hear what you would personally characterize as the greatest challenge during your doctoral phase.**

Financing problems	<input type="checkbox"/> 1
Feasibility of the topic	<input type="checkbox"/> 2
Activities unrelated to my doctorate	<input type="checkbox"/> 3
Lack of support from my advisor(s)	<input type="checkbox"/> 4
Something else, namely:	<input type="checkbox"/> 5

---

German Centre for Higher Education Research and Science Studies (2024). DZHW PhD Panel 2014 - Survey 1. Data collection: 2015. Hanover: FDZ-DZHW.10.21249/DZHW:phd2014:4.0.0. Questionnaire "Karrieren Promovierter" (1<sup>st</sup> wave - English)". Question 1.1.

## Consistency of scales and response options

- consistent **response scales** (e.g., if using a 5-point Likert scale, use it for all related questions).
- **response formats** consistent (e.g., using checkboxes or radio buttons uniformly).
- ensure **labels** for scales (e.g., 1 = strongly disagree, 5 = strongly agree) are clear and easy to interpret

## Simple and clear visual layout

- clean **fonts**, adequate **font sizes**
- neutral colours with **enough contrast** (e.g. black text on white background)
- adequate **white space** between questions to avoid cramped appearance
- use headers and subheaders to **separate sections**
- **bold or italics** for key points, but avoid overuse of special formatting
- instructions, questions, and response options are **clearly visible** and spaced out
- response options for each question are **aligned** properly
- **design is consistent** across the entire questionnaire
- **avoid overloading** with questions per page

**Personal characteristics, goals and motives**

**6.1** How important were the following motives for your doctorate? ☒ (X)

	very unimportant	unimportant	neutral	important	very important
Satisfying my academic/scientific inclinations	1	2	3	4	5
Furthering my own personal development	1	2	3	4	5
Gaining time for choosing a career	1	2	3	4	5
Making up for academic/scientific deficits	1	2	3	4	5
Doing something new and totally different	1	2	3	4	5
Avoiding unemployment	1	2	3	4	5
Maintaining contact to the institution of higher education	1	2	3	4	5
Specialising in a specific field	1	2	3	4	5
Researching an interesting topic	1	2	3	4	5
Launching an academic career	1	2	3	4	5
Working in research	1	2	3	4	5
Afterwards pursuing a career outside of academia and/or science	1	2	3	4	5
Improving my career opportunities	1	2	3	4	5
Experiencing a sense of self-assurance	1	2	3	4	5
Enhancing my acceptance among customers, clients and business partners	1	2	3	4	5
Satisfying my curiosity	1	2	3	4	5
Maintaining my status as a student	1	2	3	4	5
Lacking confidence in my career opportunities with my previous degree	1	2	3	4	5

**6.2** To what extent do you think each statement applies to you personally? ☒ (X)

	doesn't apply at all	applies completely			
I can rely on my own abilities in difficult situations.	1	2	3	4	5
I am able to solve most problems on my own.	1	2	3	4	5
I can usually solve even challenging and complex tasks well.	1	2	3	4	5
I'm my own boss.	1	2	3	4	5
If I work hard, I will succeed.	1	2	3	4	5
Whether at work or in my private life: What I do is mainly determined by others. Fate often gets in the way of my plans.	1	2	3	4	5

**6.3** Every individual has certain goals that are particularly important in life. Please indicate the extent to which each of the following goals are important to you personally. ☒ (X)

	very unimportant	unimportant	neutral	important	very important
Having a job that contributes to innovations	1	2	3	4	5
Developing new ideas	1	2	3	4	5
Tackling difficult and challenging tasks	1	2	3	4	5
Manufacturing and designing things	1	2	3	4	5
Having a well-equipped workplace	1	2	3	4	5
Achieving an excellent balance between job requirements and one's own abilities	1	2	3	4	5
Having good opportunities for advancement	1	2	3	4	5
Working in a managerial position	1	2	3	4	5
Independently organizing my work	1	2	3	4	5
Having a position that gives me the authority to make my own decisions	1	2	3	4	5
Achieving above-average results in my field	1	2	3	4	5
Realizing the full potential of my abilities	1	2	3	4	5
Managing and leading other people	1	2	3	4	5
Enjoying trust among colleagues	1	2	3	4	5
Working in a well-respected profession	1	2	3	4	5
Having a secure job	1	2	3	4	5
Being sure of always having a job	1	2	3	4	5
Earning a lot of money	1	2	3	4	5
Earning so much that one can afford a great deal of things	1	2	3	4	5
Having a boss who treats me fairly	1	2	3	4	5
Pursuing a career in research/academia.	1	2	3	4	5
Standing up for others	1	2	3	4	5
Maintaining many social contacts	1	2	3	4	5
Expanding my mental horizon	1	2	3	4	5
Further developing my abilities	1	2	3	4	5
Developing my personality	1	2	3	4	5
Reconciling career and family	1	2	3	4	5
Having a lot of time for my partner	1	2	3	4	5
Having a lot of free time	1	2	3	4	5
Enjoying life to the fullest	1	2	3	4	5
Having a high social standing	1	2	3	4	5
Enjoying public recognition	1	2	3	4	5
Having children	1	2	3	4	5

**6.4** Do you intend to work over the long term in academia/research? ☒ (X)

no, absolutely not 1 2 3 4 5 yes, definitely



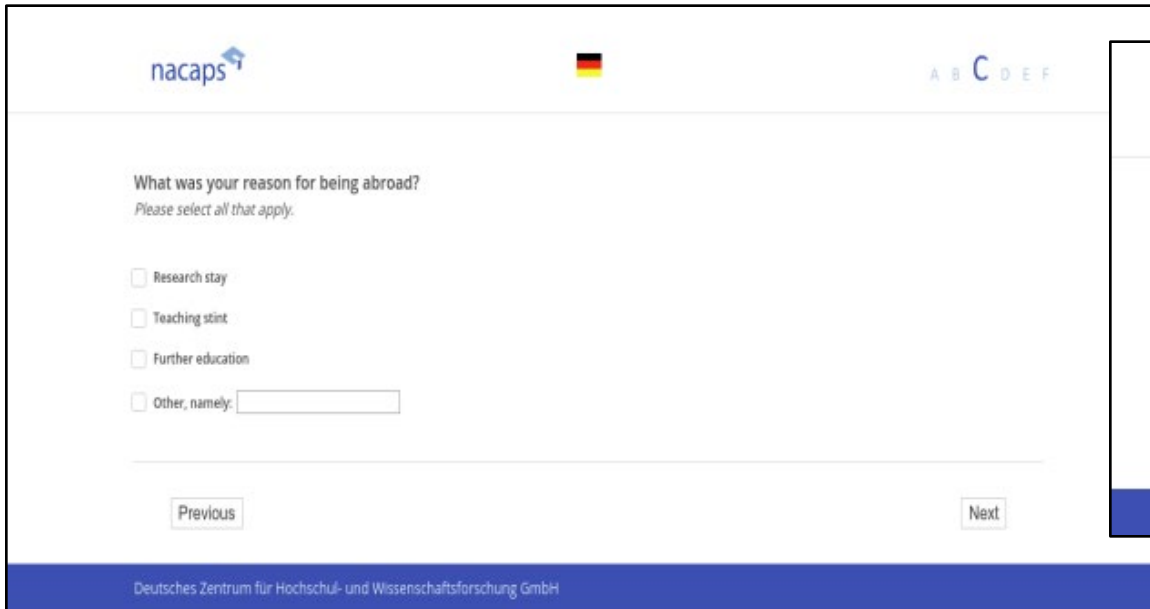
## Example 1


**3.10** Which individual(s) in your academic or research environment was/were the most important source(s) of support in the following areas during your doctoral phase?  
Please provide only one response per column.

	Research-related questions concerning your doctorate	Emotional support during your doctoral phase	Career planning
Official advisors	<input type="checkbox"/> 1	<input type="checkbox"/> 1	<input type="checkbox"/> 1
(Other) professors	<input type="checkbox"/> 2	<input type="checkbox"/> 2	<input type="checkbox"/> 2
Project managers or other superiors	<input type="checkbox"/> 3	<input type="checkbox"/> 3	<input type="checkbox"/> 3
Doctoral candidates	<input type="checkbox"/> 4	<input type="checkbox"/> 4	<input type="checkbox"/> 4
(Other) research associates or coworkers	<input type="checkbox"/> 5	<input type="checkbox"/> 5	<input type="checkbox"/> 5
Other	<input type="checkbox"/> 6	<input type="checkbox"/> 6	<input type="checkbox"/> 6
No one	<input type="checkbox"/> 7	<input type="checkbox"/> 7	<input type="checkbox"/> 7

German Centre for Higher Education Research and Science Studies (2024). DZHW PhD Panel 2014 - Survey 1. Data collection: 2015. Hanover: FDZ-DZHW.10.21249/DZHW:phd2014:4.0.0. Questionnaire "Karrieren Promovierter" (1<sup>st</sup> wave - English)". Question 3.10

## Example 2



nacaps  A B C D E F

What was your reason for being abroad?  
*Please select all that apply.*

☐ Research stay


☐ Teaching stint

☐ Further education

☐ Other, namely:

Deutsches Zentrum für Hochschul- und Wissenschaftsforschung GmbH





nacaps  A B C D E F

In what country/countries were you?

Deutsches Zentrum für Hochschul- und Wissenschaftsforschung GmbH


German Centre for Higher Education Research and Science Studies (2024). National Academics Panel Study (Nacaps) 2018 - Survey 1. Data collection: 2019. Hanover: FDZ-DZHW. <https://doi.org/10.21249/DZHW:nac2018:2.0.0>. Questionnaire "Nacaps 2018. Variable Questionnaire for National Academics Panel Study 2018 (1st wave - doctoral candidates) (English)". Question C44 & C45.

## Example 2

DZHW. nacaps  A B C D 


Please give more details on the stays abroad – or your current stay abroad - by clicking and unfolding the corresponding field.  
*In case you did not live in Germany during this time, please refer to stays outside of your home country. If you have more than six stays abroad, please provide information on the six most important ones.*


▶ 1st stay

**Primary Purpose**  
Please select 


**Country**

**Duration**  
 month(s)  
(please round to full months)

**Start**  
Month  
Please select 

Year  
Please select 

▼ 2nd stay

**Primary Purpose**  
Please select 

**Country**

**Duration**  
 month(s)  
(please round to full months)

**Start**  
Month

German Centre for Higher Education Research and Science Studies (2024). National Academics Panel Study (Nacaps) 2018 - Survey 4. Data collection: 2022. Hanover: FDZ-DZHW. <https://doi.org/10.21249/DZHW-nac2018:2.0.0>. Questionnaire "Nacaps 2018. Variable Questionnaire for National Academics Panel Study 2018 (4th wave - doctoral candidates) (English)". Question A60.

Example 3

Personal details

9.1

When were you born?

month/year

/

(MM)

(YYYY)

9.2

Where were you born?

X

Germany

postal code:

or city:

In another country, namely:

9.3

Your sex?

X

Male

Female

9.4

Are you in a committed relationship?

X

No, I'm single

Yes, in a committed relationship

Yes, married/in a civil union/  
registered partnership

>> Skip to question 9.7

... and have been since:

month/year:

/

(MM)

(YYYY)

9.5

Is your partner currently employed?

X

Yes, full-time

Yes, part-time

No

9.6

Do you live in a joint household?

X

Yes

No

9.7

Do you have children?

X

This includes both biological and adopted children. Please include the children of your partner who are living in your household.

Yes

No

>> Proceed to question 9.8

>> Skip to question 9.9

9.8

When were these children born?

Please also indicate whether this is your own child (biological child or adopted child) and whether the child is currently living in your household.

month

year

own child?

in household?

1st child

2nd child

3rd child

4th child

9.9

In which year and with what grade did you acquire your university entrance qualification (e.g., high school certificate)?

graduating year

graduating grade

9.10

Where did you acquire your university entrance qualification?

X

Germany

postal code:

or city:

In another country, namely:

9.11

What academic degrees did you receive before you completed your doctorate during the 2013/14 graduation year?

	Graduation (month/year)	Number of semesters	graduating grade (score, if applicable)	Type of degree (e.g., bachelor's, state examination, Diplom, doctorate)	Subject area	Name and location of institution of higher education
Degree	<div><div><div></div><div></div></div><div><div></div><div></div></div><div>/</div><div><div><div></div><div></div><div></div><div></div></div><div><div></div><div></div></div></div><div><div>(MM)</div><div>(YYYY)</div></div></div>	<div><div></div><div></div></div>	<div><div><div></div><div></div></div><div><div></div><div></div></div></div> <div><div>(<div><div></div><div></div></div>,<div><div></div><div></div></div>)</div></div>			
2nd degree, if applicable	<div><div><div></div><div></div></div><div><div></div><div></div></div><div>/</div><div><div><div></div><div></div><div></div><div></div></div><div><div></div><div></div></div></div><div><div>(MM)</div><div>(YYYY)</div></div></div>	<div><div></div><div></div></div>	<div><div><div></div><div></div></div><div><div></div><div></div></div></div> <div><div>(<div><div></div><div></div></div>,<div><div></div><div></div></div>)</div></div>			
3rd degree, if applicable	<div><div><div></div><div></div></div><div><div></div><div></div></div><div>/</div><div><div><div></div><div></div><div></div><div></div></div><div><div></div><div></div></div></div><div><div>(MM)</div><div>(YYYY)</div></div></div>	<div><div></div><div></div></div>	<div><div><div></div><div></div></div><div><div></div><div></div></div></div> <div><div>(<div><div></div><div></div></div>,<div><div></div><div></div></div>)</div></div>			
4th degree, if applicable	<div><div><div></div><div></div></div><div><div></div><div></div></div><div>/</div><div><div><div></div><div></div><div></div><div></div></div><div><div></div><div></div></div></div><div><div>(MM)</div><div>(YYYY)</div></div></div>	<div><div></div><div></div></div>	<div><div><div></div><div></div></div><div><div></div><div></div></div></div> <div><div>(<div><div></div><div></div></div>,<div><div></div><div></div></div>)</div></div>			

German Centre for Higher Education Research and Science Studies (2024). DZHW PhD Panel 2014 - Survey 1. Data collection: 2015. Hanover: FDZ-DZHW.10.21249/DZHW:phd2014:4.0.0. Questionnaire "Karrieren Promovierter" (1st wave - English). Question 9.1-9.11

80

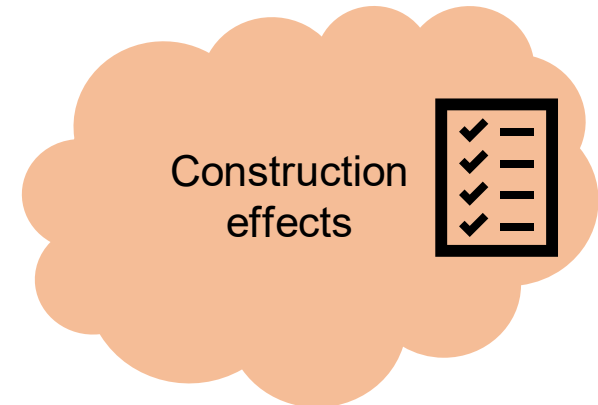
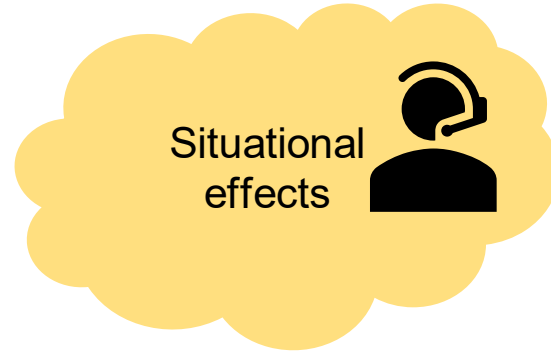
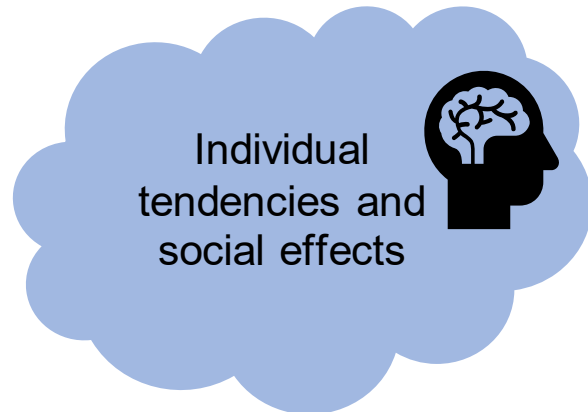
# Break





# **Challenges and Questionnaire Pretesting**


## What can possibly go wrong?



## Social Desirability Bias

Respondents provide answers they believe are **socially acceptable** or favorable rather than their true opinions or behaviors.

- overreporting positive and underreporting negative behavior



The screenshot shows a survey interface for 'nacaps' (National Academics Panel Study). At the top, there is a logo for 'nacaps' and a German flag. Below the logo, the question is: 'Are you aware of the rules on good scientific practice?'. There are two radio buttons: 'Yes' and 'No'. The 'Yes' button is selected. At the bottom of the question area, there are two buttons: 'Previous' and 'Next'. Below the question area, there is a blue bar with the text 'Deutsches Zentrum für Hochschul- und Wissenschaftsforschung GmbH'.

German Centre for Higher Education Research and Science Studies (2024). National Academics Panel Study (Nacaps) 2018 - Survey 1. Data collection: 2019. Hanover: FDZ-DZHW. <https://doi.org/10.21249/DZHW:nac2018:2.0.0>. Questionnaire "Nacaps 2018. Variable Questionnaire for National Academics Panel Study 2018 (1st wave - doctoral candidates) (English)". Question B35.

## Measures

- ✓ Assure **anonymity** and confidentiality
- ✓ Frame questions in a **neutral** way
- ✓ **Sensitive topics** are better surveyed paper-pencil/web-based

## Acquiescence (Yes-Saying)

Respondents have a **tendency to agree** with statements regardless of their actual opinions

## Extreme Response Bias

Respondents tend to select the **most extreme** response options (e.g., "strongly agree" or "strongly disagree"), regardless of their actual feelings.

## Central Tendency (No opinion)

Respondents consistently select the **middle or neutral** options or 'N/A' or 'I don't know', even if they have stronger opinions.



Meme using the "Train vs. School Bus" template. Captioned version by @iopsychmemes (Instagram) (accessed June 25, 2025).

## Measures

- ✓ Use **reverse-worded** questions (e.g., alternating between positive and negative phrasing) to check for response consistency
- ✓ Provide **(neutral and) balanced** response options

A screenshot of the Nacaps 2018 questionnaire interface. The header shows the "nacaps" logo, a German flag, and navigation links "A B C D". The main question is "To what extent do the following statements apply to the supervision during your doctoral phase?". Below the question is a Likert scale with five points: "(1) not at all applicable", "2", "3", "4", and "(5) fully applicable". Three statements are listed with corresponding sliders: "I could rely on receiving supervision throughout the entire period when I pursued my doctorate.", "There were phases of my doctorate in which I received insufficient advice and supervision.", and "During my doctoral phase, I had to look for alternative sources of advice and supervision." The sliders are currently positioned at the "2" mark.



## Non-Attributes

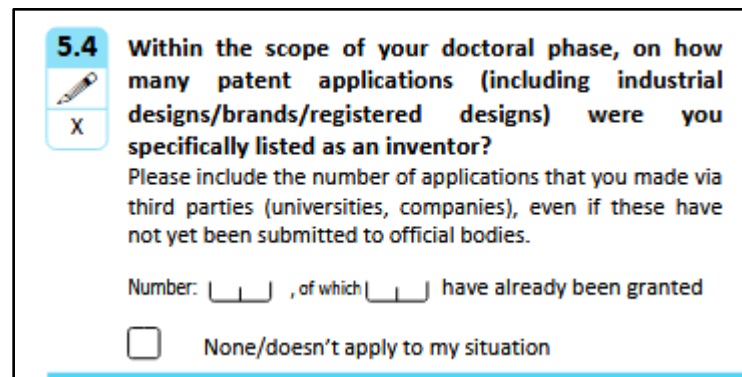
Respondents select options that are **not applicable** to them or answer questions when they **lack the necessary knowledge** or experience

## Measures

- ✓ Use **screening or filter questions**
- ✓ Include “Not Applicable” (**N/A**) Options
- ✓ Limit **forcing**



German Centre for Higher Education Research and Science Studies (2024). National Academics Panel Study (Nacaps) 2018 - Survey 4. Data collection: 2022. Hanover: FDZ-DZHW. <https://doi.org/10.21249/DZHW:nac2018:2.0.0>. Questionnaire "Nacaps 2018. Variable Questionnaire for National Academics Panel Study 2018 (4th wave - doctoral candidates) (English)". Question D04. Instrument adapted from Delgado-Osorio, X., Gierke, M., Jaen, J., Kansime, J., Lonken, D., Pérez-Bosch Quesada, E., Ramachandran, K., Rizzi, T. & Saxena, P. (2023). Being a Doctoral Researcher in the Leibniz Association: 2021 Leibniz PhD Network Survey Report, <https://www.ssoar.info/ssoar/handle/document/89848>



German Centre for Higher Education Research and Science Studies (2024). DZHW PhD Panel 2014 - Survey 1. Data collection: 2015. Hanover: FDZ-DZHW. [10.21249/DZHW:phd2014:4.0.0](https://doi.org/10.21249/DZHW:phd2014:4.0.0). Questionnaire "Karrieren Promovierter" (1st wave - English)". Question 5.4

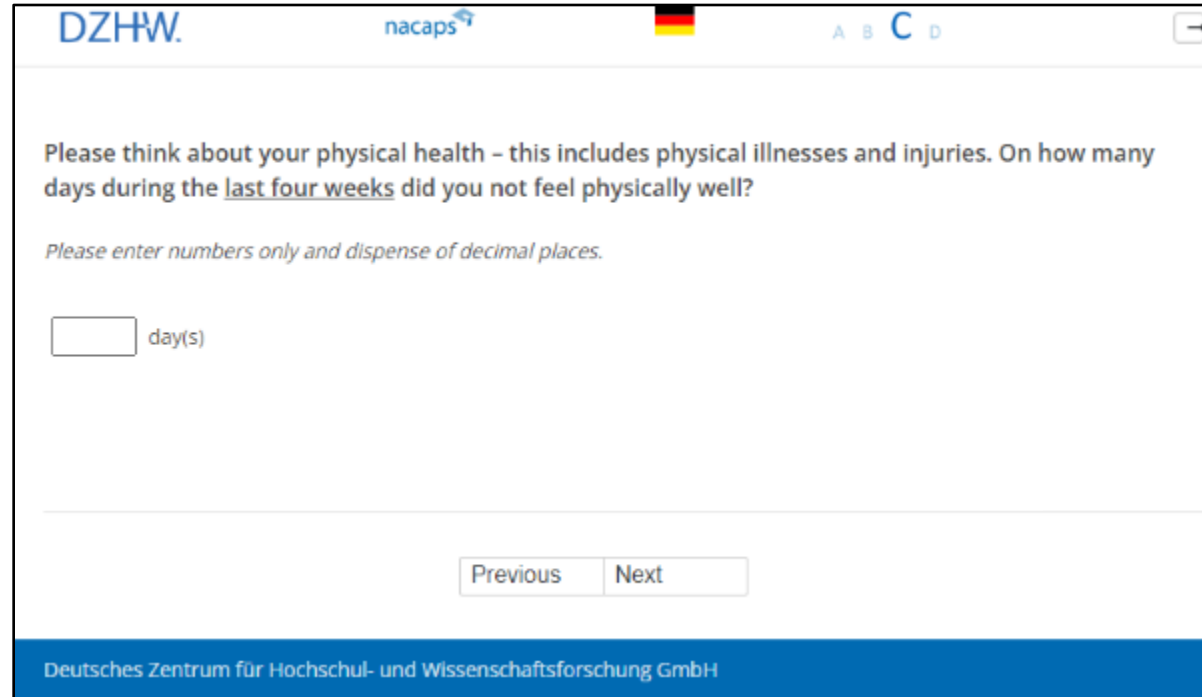


## Recall Bias

Respondents have **difficulty accurately remembering** past behaviors, events, or experiences, leading to inaccuracies in their responses.


## Measures

- ✓ Ask about **recent behaviors** rather than events far in the past
- ✓ Provide **reference periods** or cues (e.g., "In the past 7 days...")



German Centre for Higher Education Research and Science Studies (2024). National Academics Panel Study (Nacaps) 2018 - Survey 4. Data collection: 2022. Hanover: FDZ-DZHW. <https://doi.org/10.21249/DZHW:nac2018:2.0.0>. Questionnaire "Nacaps 2018. Variable Questionnaire for National Academics Panel Study 2018 (4th wave - doctoral candidates) (English)". Question C10. Instrument adopted from Center for Disease Control and Prevention (2000). Measuring Healthy Days. Atlanta, Georgia: CDC,

# Individual Tendencies and Social Effects

DZHW. nacaps  A B C D

How high is/was your monthly gross income (before deducting taxes and social contributions), including regular monthly bonuses (e. g. shift bonuses, performance bonuses and paid overtime)?

For the self-employed: How much are/were your average earnings before taxes or your fees collected each month?

For persons employed abroad: Please indicate your gross income without converting and enlist the local currency (e. g. US-Dollar or CHF) in the second input field.

*If you are (currently) not employed, please refer to your last job or the job before interrupting employment.*


*Please round to full amounts of Euros and dispense of decimal places and delimiters (12345 instead of 12.345.00).*

Amount:  Euro/month

Currency:  (if a currency other than Euro)

Deutsches Zentrum für Hochschul- und Wissenschaftsforschung GmbH

German Centre for Higher Education Research and Science Studies (2024). National Academics Panel Study (Nacaps) 2018 - Survey 4. Data collection: 2022. Hanover: FDZ-DZHW. <https://doi.org/10.21249/DZHW:nac2018:2.0.0>. Questionnaire "Nacaps 2018. Variable Questionnaire for National Academics Panel Study 2018 (4th wave - doctoral candidates) (English)". Questions B17 & B18.

DZHW. nacaps  A B C D University of Bremen

If you do not know the exact amount of your monthly gross income or do not wish to give an exact figure for it, it would help us as well if you could at least assign yourself to one of the following rough categories.

Please indicate your (past) gross monthly income.

☐ Up to 250 Euro

☐ 251 - 500 Euro

☐ 501 - 750 Euro

☐ 751 - 1.000 Euro

☐ 1.001 - 1.250 Euro

☐ 1.251 - 1.500 Euro

☐ 1.501 - 1.750 Euro

☐ 1.751 - 2.000 Euro

☐ 2.001 - 2.250 Euro

☐ 2.251 - 2.500 Euro

☐ 2.501 - 2.750 Euro

☐ 2.751 - 3.000 Euro

☐ 3.001 - 3.500 Euro

☐ 3.501 - 4.000 Euro

☐ 4.001 - 4.500 Euro

☐ 4.501 - 5.000 Euro

☐ 5.001 - 5.500 Euro

☐ 5.501 - 6.000 Euro

☐ 6.001 - 6.500 Euro

☐ More than 6.500 Euro

Deutsches Zentrum für Hochschul- und Wissenschaftsforschung GmbH

## Item-nonresponse

Respondents **skip** or **refuse** to answer one or more questions

## Measures

- ✓ Assure **anonymity** and confidentiality
- ✓ Provide **optional questions** for sensitive topics or include a "Prefer not to say" option



nacaps 

A B C D E

We would like to ask questions on health and possible impairments. This information provides important indicators on the distribution of health restrictions amongst doctoral candidates. The data also provide indications as to how conditions can be improved for doctoral candidates with health issues.

*If you are willing to answer the following questions on the topics of health and impairment, you are of course still free not to answer single questions.*

☐ Yes, I want to answer the questions on the topics of health and impairment.

☐ No, I do not want to answer the questions on the topics of health and impairment.

Previous Next

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German Centre for Higher Education Research and Science Studies (2024). National Academics Panel Study (Nacaps) 2018 - Survey 4. Data collection: 2022. Hanover: FDZ-DZHW. <https://doi.org/10.21249/DZHW:nac2018:2.0.0>. Questionnaire "Nacaps 2018. Variable Questionnaire for National Academics Panel Study 2018 (4th wave - doctoral candidates) (English)". Question C09.

## Interviewer Effect

**Characteristics** of the interviewer (e.g., age, gender, ethnicity, demeanor) can influence how respondents answer questions

## Measures

- ✓ Train interviewers to be neutral and non-judgmental.
- ✓ **Standardized** scripts and question phrasing to reduce variability in how questions are asked
- ✓ Use **self-administered modes** for sensitive topics.

## Presence Effect

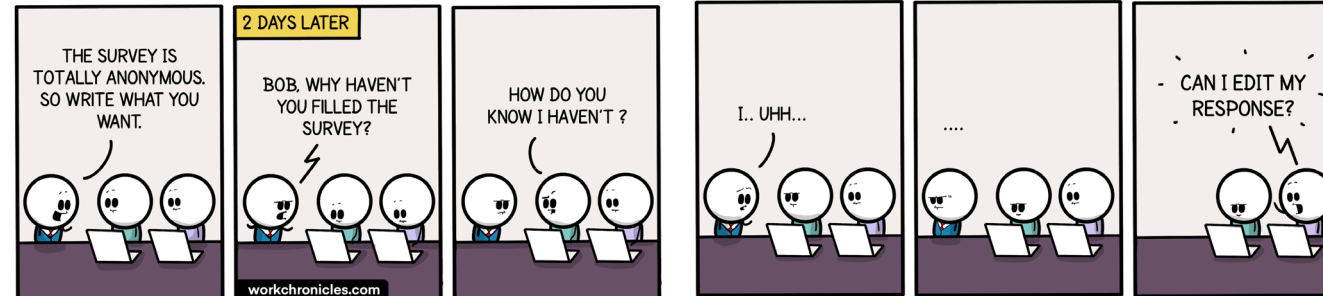
The **presence of other people** during the survey (e.g., family members, peers) can influence responses

## Measures

- ✓ Conduct surveys in **private settings** to minimize the influence of others
- ✓ In group settings emphasize the importance of individual responses and **ensure confidentiality**

## Sponsor Effect

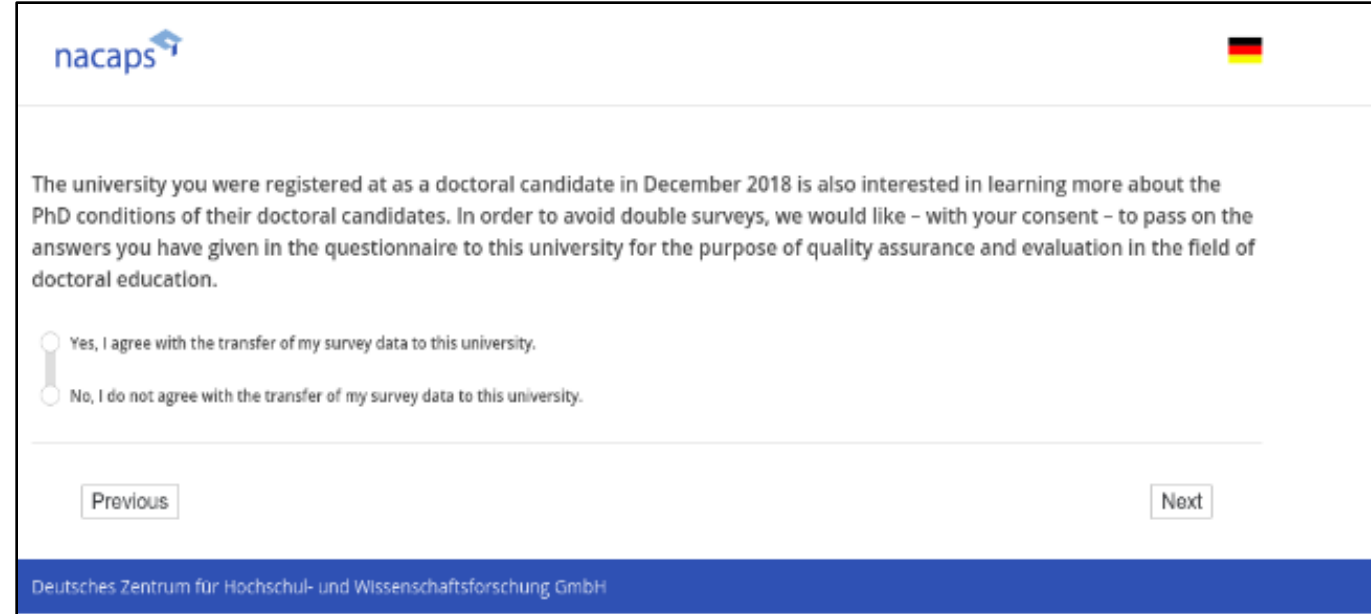
Respondents' answers are influenced by their knowledge of who is **sponsoring or funding** the survey.



Work Chronicles / Ravi B. (2021, August 12). Comic: Anonymous Employee Survey. Retrieved June 25, 2025, from <https://workchronicles.substack.com/p/comic-anonymous-employee-survey>

## Measures

- ✓ Assure **anonymity** and confidentiality
- ✓ Use **third-party survey** administrators
- ✓ **Disclose** sponsorship transparently



German Centre for Higher Education Research and Science Studies (2024). National Academics Panel Study (Nacaps) 2018 - Survey 1. Data collection: 2019. Hanover: FDZ-DZHW. <https://doi.org/10.21249/DZHW:nac2018:2.0.0>. Questionnaire "Nacaps 2018. Variable Questionnaire for National Academics Panel Study 2018 (1st wave - doctoral candidates) (English)". Question index2.



## Leading Bias

Questions subtly **guide** respondents toward a particular answer.

## Question Wording Bias

Questions are confusing, vague or have unnecessary technical jargon that is **difficult to understand**

## Double Barrelled questions

Combine **two separate inquiries into one**, forcing the respondents to answer both with a single response.

## Assumptive Bias

Question makes an assumption that **might not be true for all respondents**.

## Negative Bias

Questions with a negative term that forces respondents to interpret **“no” as the positive answer**

## Response Option Effects

The way **response options** are structured can shape how respondents answer

## Measures

- ✓ Choose and construct your questions and response scales wisely

## Bad and good examples



Avoid **leading** questions

*"Don't you agree that our customer service is excellent?"*

*"How would you rate our customer service?"*

Use **balanced** response options

*"Good,"  
"Very Good"  
"Excellent"*

*"Very Dissatisfied," "Dissatisfied,"  
"Neutral,"  
"Satisfied," "Very Satisfied,"*

**Frame** questions neutrally

*"How much do you love dogs?"*

*"What do you think of dogs?"*

Avoid **double-barred questions**

*"How satisfied are you with your salary and job responsibilities?"*

*"How satisfied are you with your salary?"  
"How satisfied are you with your job responsibilities?"*

Avoid **assumptions**

*"How do you cope with the stress of being a parent?"*

*"Are you a parent?" following by a separate questions for parents*

## Visual Design Effects

Visual layout of a survey can influence how respondents interact with the questionnaire.

## Measures

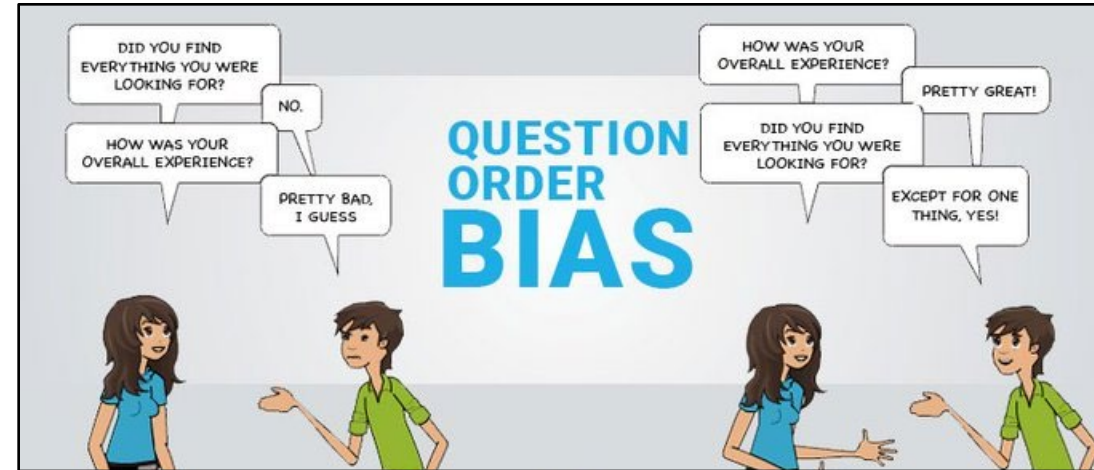
- ✓ Layout your questionnaire wisely



Meme combining the "Hopeless Romantic tattoo fail" and the "Internet Grandma" meme format (original stock photo). Composite version retrieved from internet meme archives (accessed June 25, 2025).

## Order Effects

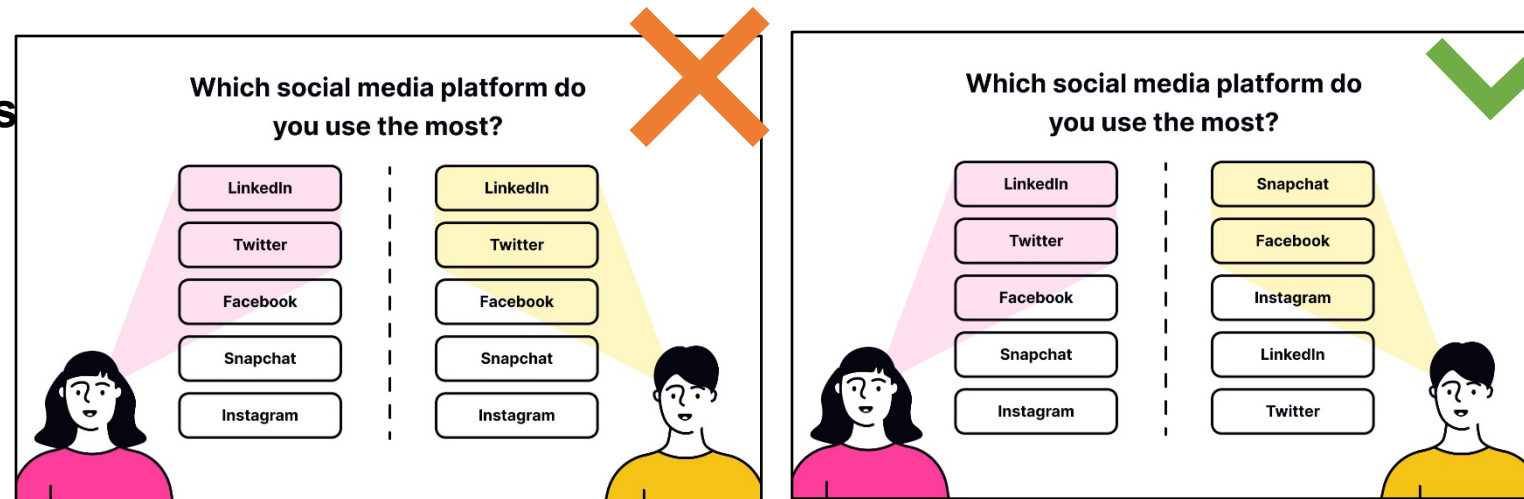
Sequence in which questions or answers are positioned can influence how respondents think about and answer subsequent questions.



UserTribe [@UserTribe]. (2019, March 3). "Why do user research? We already know what our users want." [Tweet with image]. Retrieved June 25, 2025, from <https://x.com/UserTribe/status/1102457649050894345>

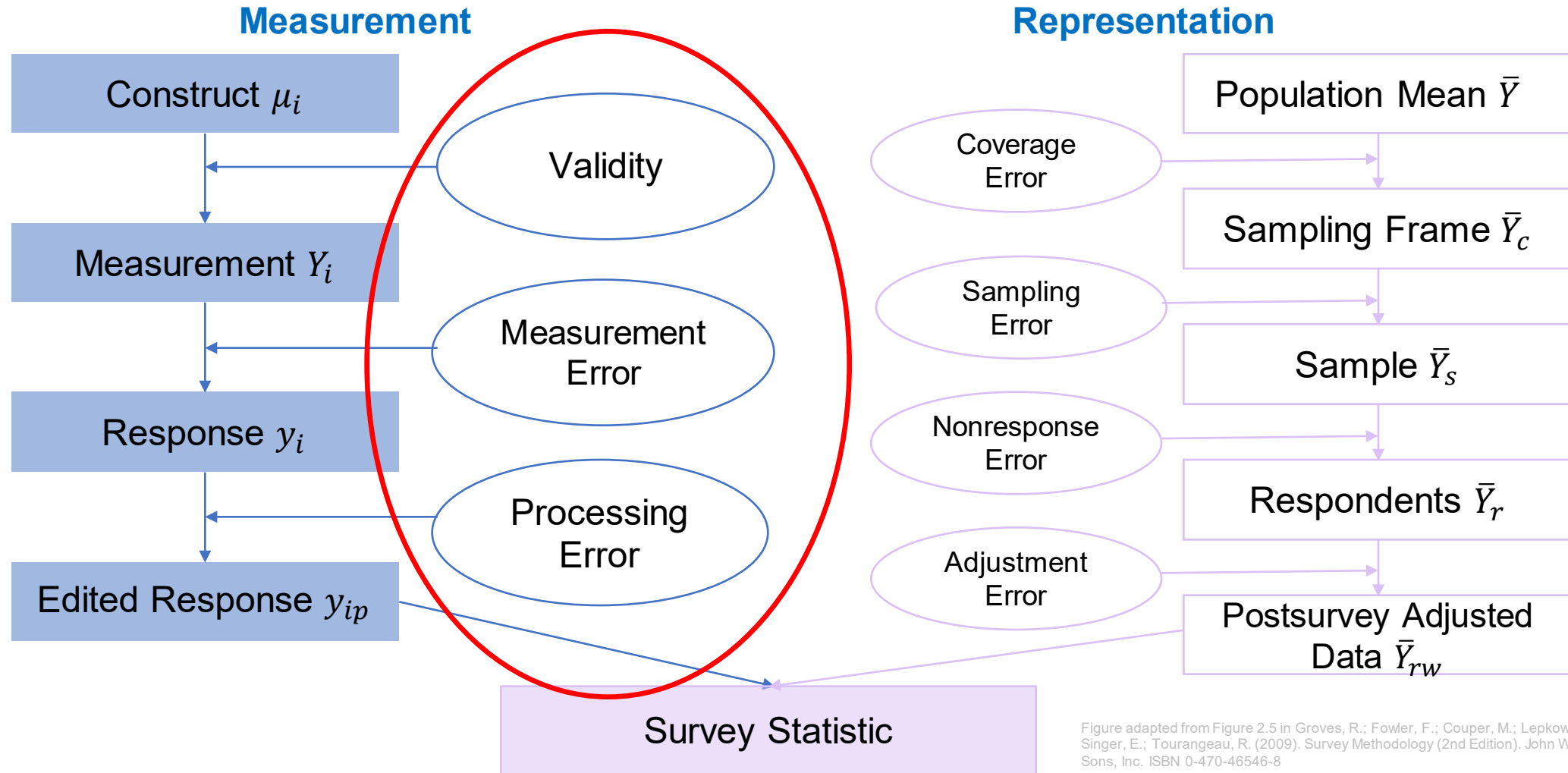
## Measures

- ✓ Use **transition statements** between sections
- ✓ **Randomize** answer categories (for online surveys)



Uxcel. (n.d.). Creating Surveys – Question Order Bias [Course module]. Retrieved June 25, 2025, from <https://app.uxcel.com/courses/ux-research/creating-surveys-522/question-order-bias-1170>

## Why pretesting?





## Pretesting

A pretest is a **preliminary test** of a question or questionnaire conducted with a small sample of participants **before the full-scale data collection begins**.

The purpose of the pretest is to **identify and correct any issues** in the question or questionnaire, such as unclear wording, biased questions, technical problems, or any factors that might lead to inaccurate or incomplete responses.

- Detects potential problems in data quality (reliability, validity, bias, completeness) before actual study
- Ensures that instruments meets projects' requirements

## Tools for Testing Survey Questions



Expert Review



Cognitive Interviews



Field Test (Pilot Study)

Qualitative  
information

Quantitative  
information

## Expert Review

### Who?

- Questionnaire design expert
- Subject matter expert
- Questionnaire administration expert (e.g. interviewers)

### What?

- Identify potential response problems
- Make recommendations for possible improvements

### How?

- Identify experts
- Individual setting or group setting
- Interview guide
- Video/audio taping
- Individual report of open-ended comments and recommended revisions for each individual question
- summary report of noted problems and revisions

### Pros

- (Relatively) cheap and fast



Meme using a modified BBC Breakfast screenshot template. Originally posted by @gbmemes on Instagram. Retrieved June 25, 2025.

## Cognitive Interviews

### Who?

- Small convenience sample representing some of the characteristics of the survey population

### What?

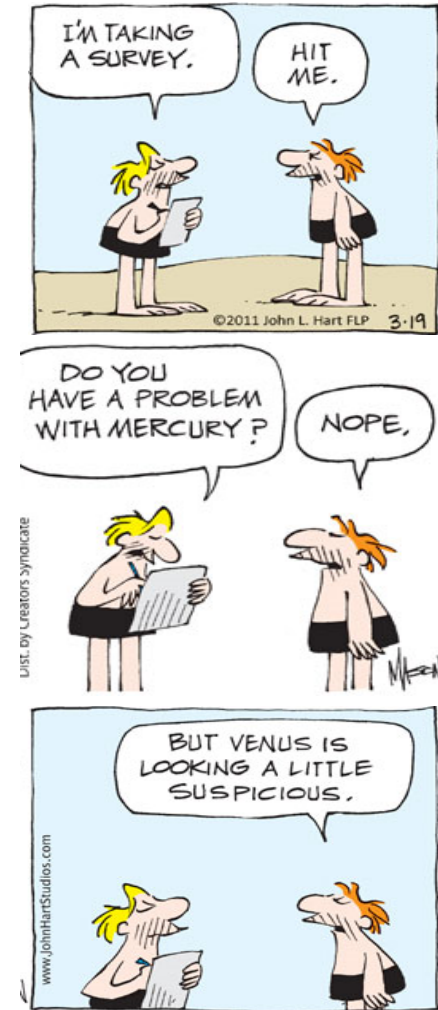
- Focuses on the cognitive processes that respondents use to answer a survey question
  - Uncovering problems with comprehension
  - Difficulties and willingness to recall/estimate
- Specific interview techniques

### How?

- Determine objectives
- Identify and recruit participants
- Individual interviews
- Interview guide
- Video/Audio taping
- Coding
- Report

### Pros and Cons

- Efficient, small groups
- Costly (money, time, resources)
- Outcomes vary by participant/interviewer



Mastroianni, M., & Hart, J. L. (2011). B.C. Comic – "I'm taking a survey". Distributed by Creators Syndicate. Retrieved June 25, 2025 from [www.johnhartstudios.com](http://www.johnhartstudios.com).

## Cognitive Interviews – Question Techniques

### Think Aloud

Participants are asked to **verbally express their thoughts**, reasoning, and decision-making process as they respond to survey questions or complete tasks

- Identifies **ambiguities** and **confusing wording** in questions
- Allows researchers to see if respondents interpret and process questions **as intended by researcher**

Survey question:

*"How many times have you visited a doctor in the past year?"*

The participant might respond by saying:

*"Hmm... the past year... does that mean the last 12 months, or from January until now? I went to the doctor for a check-up in February, but I'm not sure if I should count that... Should I include visits to a specialist as well?"*



## Cognitive Interviews – Question Techniques

### Probing

The interviewer asks **additional questions** to delve deeper into the respondent's thought process

- **Clarification Probes:** To understand what the respondent meant by their answer.
- **Elaboration Probes:** To ask the respondent to expand on their reasoning or process.
- **Comprehension Probes:** To check if the respondent understood the question correctly.

Survey question:

*"How many times did you exercise in the last month?"*

The respondent answers:

*"About 5 times."*

The interviewer might ask follow-up questions like:

- *"Can you tell me more about what types of activities you consider exercise?"*
- *"What do you understand by 'exercise' in this question?"*
- *"What made you decide on the number 5? Was it an estimate, or did you track your exercise sessions?"*

## Cognitive Interviews – Question Techniques

### Paraphrasing

The interviewer asks the respondent to **restate a survey question** in their own words.

- Ensures that respondents interpret the question **as intended** by the researcher
- Identifies parts of the question that might be unclear or prone to **misinterpretation**
- Helps **refine the wording of questions** to ensure they are easily understood

Survey Question:

*"How often do you feel stressed at work?"*

The interviewer's paraphrasing request:

*"Can you tell me, in your own words, what this question is asking?"*

The respondent might say:

*"It's asking how frequently I get overwhelmed or anxious while working."*

## Cognitive Pretesting in Small Groups

**Step 1:** Each participant reviews their **assigned question** (check your private message).

**Step 2:** Individually, create **2–3 pretesting questions** to evaluate your question using these methods:

- **Think Aloud** – Ask respondents to verbalize their thought process.
- **Probing** – Use follow-up questions to clarify interpretations.
- **Paraphrasing** – Have respondents restate the question in their own words.

**Step 3:** In **groups of 2**, take **turns asking your question** and **pretesting** it with each other using your pretesting questions.

**Step 4: Discuss findings:** Did any issues or unexpected interpretations arise?

## Cognitive Interviews with ChatGPT

Experiment by [Lenzner & Hadler \(2024\)](#):

How good is ChatGPT at

- ...identifying potential question problems prior to cognitive testing? ✓
  - ...suggesting cognitive probing questions to test draft survey questions? ✓
  - ...simulating or predicting respondents' answers to probing questions? ✗
- Adds to the researchers' toolkit
  - ChatGPT pretesting is better than no pretesting
  - Ability might improve in the future (GPT 3.5 was used)

**You**  
**Task:** What problems can arise when answering the following survey item?  
**Survey item/question text:** The following question is about your child's movement. Please think of lively movements such as romping, brisk running, cycling and sports in daycare, school, education/work and leisure time. How much lively movement has your child done in the last week?  
**Survey item/answer options:** less than 1 hour, 1-2 hours, 3-4 hours, 5-6 hours, at least 7 hours, no answer  
**Target group:** Parents of children between the ages of 3 and 15  
**Interview mode:** face-to-face

**You**  
**Survey item/question text:** The following question is about your child's movement. Please think of lively movements such as romping, brisk running, cycling, and sports in daycare, school, education/work, and leisure time. How much lively movement has your child done in the last week?  
**Survey item/answer options:** less than 1 hour, 1-2 hours, 3-4 hours, 5-6 hours, at least 7 hours, no answer  
**Task:** Create an interview protocol with cognitive probing questions that can be used to answer the following questions.  
**Questions:**

1. How is the term "lively" understood and does it match the intended understanding? (Intended interpretation: "The term "lively" refers to movements that increase the child's breathing rate and may cause them to sweat. This can be targeted sports activities, lively movement games, but also everyday activities, such as cycling from place to place or brisk walking/running or romping.")
2. Is it understood that it can be both "lively movement in everyday life", such as cycling

## Field test (pilot study)

### Who?

- Small (convenience) sample representing some of the characteristics of the survey population

### What?

- Identifying practical issues and survey flow
- Examining key variables
- Examining reliability and validity of measurement models of latent constructs

### How?

- Implement questionnaire
- Built in Add-On
- Sample of 15-35 respondents (LCA & SEM require min. 100 respondents)
- Adopt similar data collection protocol
- Data cleaning
- Statistical analyses

### Pros and Cons

- Efficient
- Costly (money, time, resources)



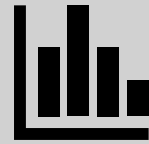


## Field test – Statistical Analyses



### **Descriptive statistics**

- Central tendency (mean, median, mode)
- Spread of data (standard deviation, variance)



### **Exploratory data analysis**

- Distribution of variables (box plots, histograms, scatter plots)
- Relationship between variables (correlation matrices)



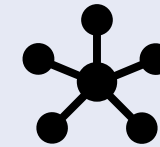
### **Feasibility and performance metrics**

- Timing
- Completion rates
- Missing Value Analysis
- Correct filtering



### **Data Quality**

- Reliability (Cronbach's Alpha, Test-Retest, Split-Half)
- Validity



### **Measurement Model Assessment**

- Exploratory Factor Analysis
- Structural Equation Modeling (SEM)
- Latent Class Analysis (LCA)

# Break



# Using Established Instruments



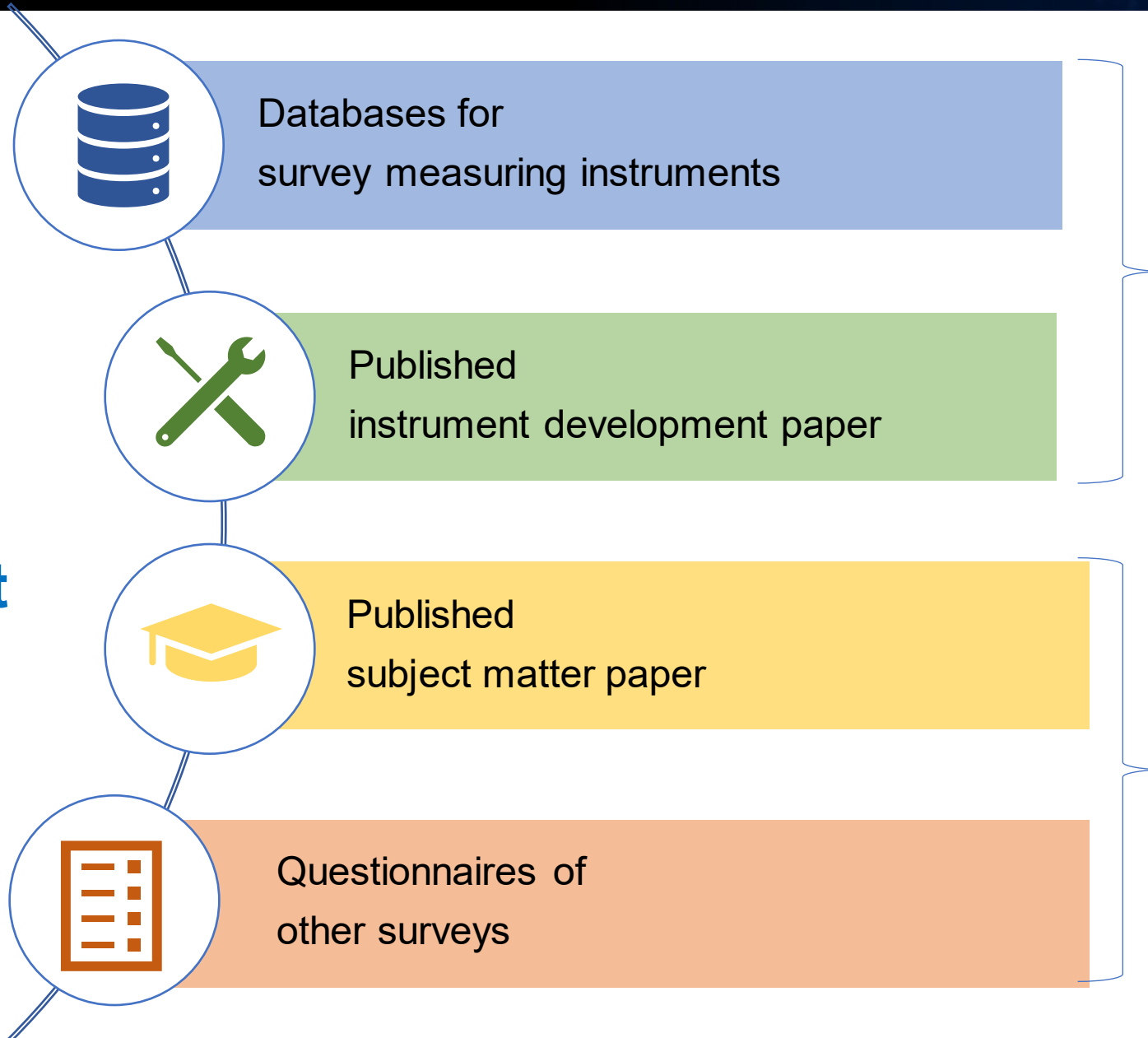
## Why is reusing existing instruments a good idea?

- They are **often tested** already
- They are **recognized** and used in the scientific community
- Allow **comparing results** across studies
- **Saves time** and resources
- **No need** to develop new questions 😊



Adams Township. (n.d.). Recycling Program. Retrieved June 25, 2025, from <https://adamstwp.org/recycling/>

## Sources for Finding Measurement Instruments



- tried ✓
- tested ✓
- documented ✓
- citable ✓
- (often) free reuse ✓

- tried ✓
- tested ??
- documented ✓
- citable ??
- reuse possible ??



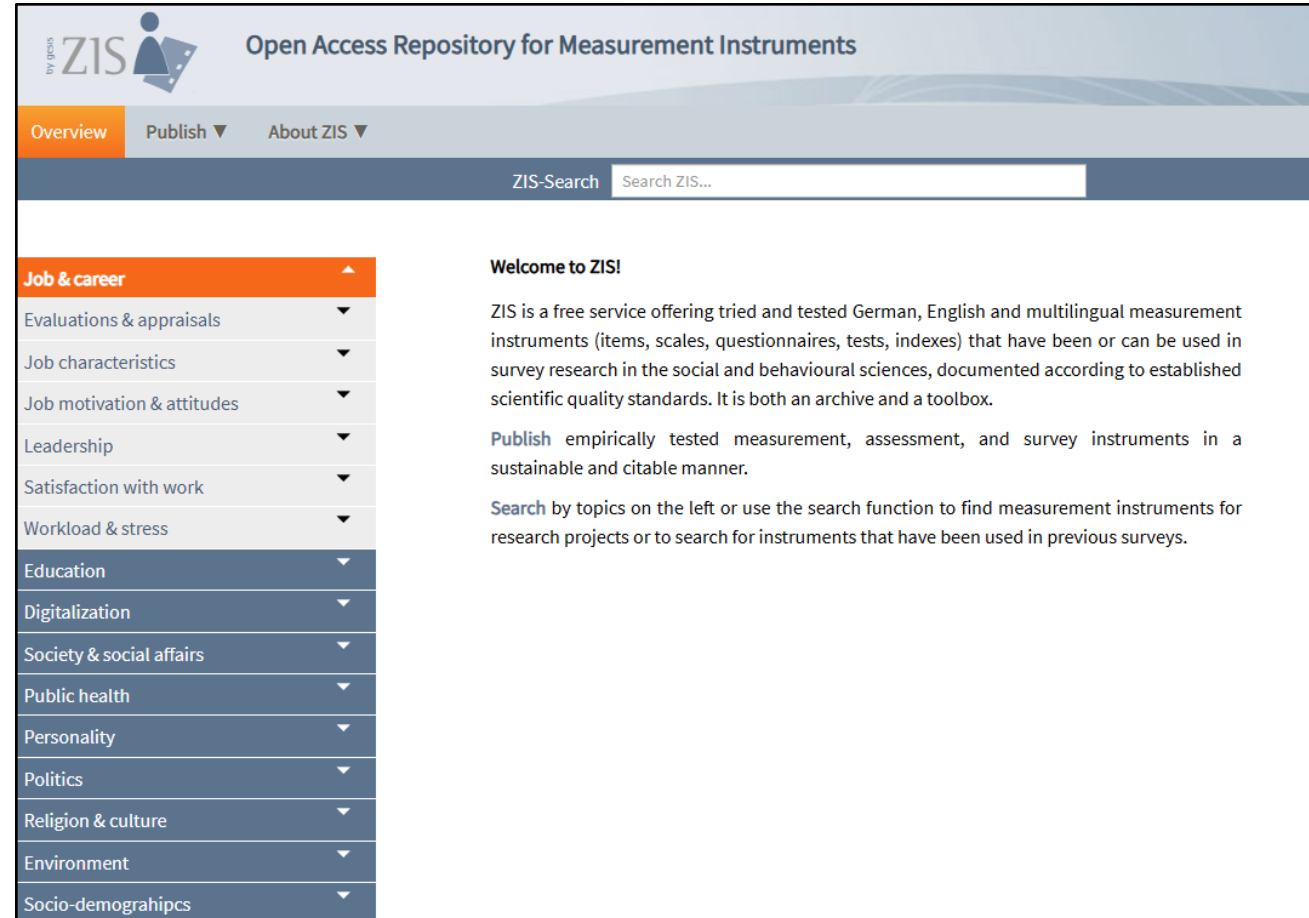
## Databases for Survey Measurement Instruments

### Social and behavioral sciences

- [ZIS Open Access Repository for Measuring Instruments](#)
- [SQPR3.0 Survey Quality Prediction System](#)
- [RatSWD Standardfragenkatalog](#) (German)
- [Documentation of assessment instruments at FDZ Bildung](#)

### Psychology

- [PSYNDEX Tests](#)
- [Open Test Archive](#)



The screenshot shows the homepage of the ZIS Open Access Repository for Measurement Instruments. The header includes the ZIS logo and the title 'Open Access Repository for Measurement Instruments'. Below the header is a navigation bar with 'Overview', 'Publish', and 'About ZIS'. A search bar is located on the right side of the navigation bar. The main content area features a left sidebar with a list of categories: 'Job & career', 'Education', 'Digitalization', 'Society & social affairs', 'Public health', 'Personality', 'Politics', 'Religion & culture', 'Environment', and 'Socio-demographics'. The 'Job & career' category is expanded, showing sub-items like 'Evaluations & appraisals', 'Job characteristics', 'Job motivation & attitudes', 'Leadership', 'Satisfaction with work', and 'Workload & stress'. The main content area on the right contains a 'Welcome to ZIS!' message, a description of the service, and instructions on how to publish and search for instruments.

## Published instrument development paper

- Specific journals on (survey methodology) like
  - [Measurement Instruments for the Social Sciences](#)
  - [ZUMA-Nachrichten](#) (older)
- Subject-specific journals

Int. J. Technology Management, Vol. 42, Nos. 1/2, 2008

### Development and validation of a survey instrument for measuring organisational renewal capability

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**Abstract:** Mastering continuous change has become an important issue for an increasing number of organisations. However, the management of innovative performance is hindered by the lack of measures that could enable the reliable assessment and effective development of organisational capabilities for continuous renewal, learning and innovation. The objective of this paper is to describe the development of a survey instrument, the Organisational Renewal Capability Inventory, for measuring organisational renewal capability, and to assess its validity and reliability. This paper contributes to the literature on innovation by providing a systematic technique for collecting, analysing and interpreting data about organisational capability for continuous renewal.

Nießen et al. Measurement Instruments for the Social Sciences (2022) 4:1  
<https://doi.org/10.1186/s42409-021-00027-6>

Measurement Instruments  
for the Social Sciences

### INTERNATIONAL ADAPTATION OF MEASUREMENT INSTRUMENTS

Open Access

### The Optimism–Pessimism Short Scale–2 (SOP2): a comprehensive validation of the English-language adaptation

Desirée Nießen<sup>1\*</sup>, Katharina Groskurth<sup>1</sup>, Christoph J. Kemper<sup>2</sup>, Beatrix Rammstedt<sup>1</sup> and Clemens M. Lechner<sup>1</sup>

#### Abstract

The Optimism–Pessimism Short Scale–2 (SOP2) described in this article measures the psychological disposition of optimism with two items. SOP2 is the English-language adaptation of an originally for the German language developed scale. Because an empirical validation of this English-language SOP2 was hitherto lacking, the aim of the present study was to assess the psychometric properties (objectivity, reliability, validity) of the English-language adaptation and to investigate measurement invariance across both language versions using heterogeneous quota samples from the UK and Germany. Our results show that the English-language adaptation has satisfactory reliability coefficients and is correlated with 10 external variables in the study (e.g., self-esteem, Emotional Stability, life satisfaction). Moreover, scalar measurement invariance of the scale holds when comparing the UK and Germany, implying the comparability of latent (covariances and latent means across the two nations. As an ultra-short scale with a completion time of < 20 s, SOP2 lends itself particularly to the assessment of dispositional optimism in survey contexts in which assessment time or questionnaire space are limited. It can be applied in a variety of research disciplines, such as psychology, sociology, or economics.

**Keywords:** Optimism, Pessimism, Expectations, Short scale, Validation

#### Introduction

Optimists and pessimists differ in their approach to the world (e.g., Carver et al., 2010). Whereas optimists look to the future with confidence and mostly expect good things to happen, pessimists are full of doubt when they look to the future and mostly expect bad things to happen. Dispositional optimism is positively related to many different areas of life, such as life satisfaction, health, employment status, and self-esteem (e.g., Hajeck & König, 2019).

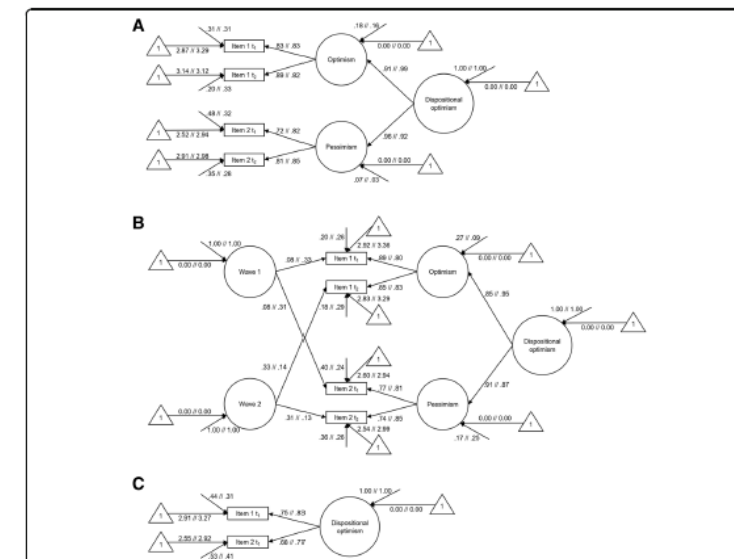
Studies investigating individual differences in optimism need a valid and efficient measure of this disposition, especially in research settings with severe time limitations.

Motivated by this need, Kemper et al. (2013) developed a two-item German-language measure of dispositional optimism, the *Skala Optimismus–Pessimismus–2* (Optimism–Pessimism Short Scale–2; SOP2). As an ultra-short scale with a completion time of less than 20 s (estimated value), SOP2 can be applied in a variety of research areas, particularly in settings with severe time limitations or other constraints on questionnaire length. The German-language SOP2 was validated in a large and diverse random sample of adults in Germany. As no comparable ultra-short scale for the measurement of dispositional optimism existed for the English-language context, the authors of the scale translated and adapted SOP2 to the English language in order to fill this gap and to broaden the range of possible applications of their scale. Because

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**Fig. 1** Measurement models of SOP2 with standardized coefficients and equalized factor loadings. The negatively worded item is reverse-scored. The coefficients of the German sample are presented after the double slash.  $N_{UK} = 468$ ,  $N_{DE} = 474$ . **A:** Hierarchical two-factor measurement model. **B:** Hierarchical two-factor measurement model with wave-specific factor loadings. **C:** Unidimensional measurement model

identification and modeling strategies and proved to be better than the previous model for both nations: UK— $\chi^2(3) = 10.728$ ,  $p < .05$ , CFI = .959, RMSEA = .074, SRMR = .053, BIC = 4,135.192; DE— $\chi^2(3) = 1.419$ ,  $p = .702$ , CFI = 1.000, RMSEA = .000, SRMR = .018, BIC = 3,944.921.<sup>10</sup> The size of the items' factor loadings, the measurement errors, and the mean structure are depicted in Fig. 1B.

**Model III** The aforementioned model developed by Kemper et al. (2013) showed good fit. However, it requires two measurement occasions with the same respondents, which is not always feasible. Therefore, we additionally present an alternative unidimensional measurement model with one latent factor capturing generalized positive expectations. This model does not require a

second measurement occasion. Because a latent measurement model with only two items and no further restrictions is not identified, we estimated an essentially tau-equivalent model setting the factor loadings to 1. Hence, the model is just-identified ( $df = 0$ ), meaning that it calculates the closed-form solution for the parameters, and we could not evaluate a model fit. Only a multi-group model with equivalence restrictions provides an interpretable model fit (see the “Cross-National, Cross-Gender, and Cross-Age Comparability” section). The size of the items' factor loadings, the measurement errors, and the mean structure are depicted in Fig. 1C.

**Validity evidence based on the relationship between scores on SOP2 and on scales measuring other variables**

The correlation coefficients between scores on SOP2 and on other scales are depicted in Table 5. Their interpretation is based on effect size guidelines proposed by Gignac and Szodorai (2016): relatively small effects ( $r \geq$

<sup>10</sup>UK—robust CFI = .959, robust RMSEA = .093; DE—robust CFI = 1.000, robust RMSEA = .000.

## Other subject matter papers

- Paper on your subject of interest
- Searching for information on what kind of instruments/ operationalization authors used
- Contact authors

Jungbauer-Gans, M. & Gross, C. (2013). Determinants of Success in University Careers: Findings from the German Academic Labor Market / Erfolgsfaktoren in der Wissenschaft – Ergebnisse aus einer Habilitiertenbefragung an deutschen Universitäten. *Zeitschrift für Soziologie*, 42(1), 74-92.  
<https://doi.org/10.1515/zfsoz-2013-0106>

74 © Lucius & Lucius Verlag

### Determinants of Success in University Careers German Academic Labor Market Erfolgsfaktoren in der Wissenschaft Habilitiertenbefragung

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Wirtschaftswissenschaften, Find  
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**Christiane Gross**  
Universität Kiel, Institut für Sozi  
cgross@soziologie.uni-kiel.de

**Summary:** What factors determine the success of university theses from discrimination theories, scholars from mathematics, law, 2005 at West German universities. In sociology, the number of publications, attaining a chair, and women's parents' years of education have mathematics, the chances of getting a share of time spent in research,

**Keywords:** Social Inequality; I Productivity.

86

Zeitschrift für Soziologie, Jg. 42, Heft 1, Februar 2013, S. 74–92

**Table 1** Summary: condensed models from all three disciplines (hazard ratio, standard error in parentheses, multiple imputations with  $k = 5$ )

	Mathematics	Law	Sociology
<b>Opportunity structure</b>			
Habilitation cohort 1996–2008 <sup>a</sup>	1.29 (.26)	.60 (.13)*	.96 (.27)
<b>Personal characteristics</b>			
Gender (1 = female)	1.09 (.32)	1.30 (.36)	2.17 (.72)*
Occupational prestige of parents	1.71 (.41)*	–	–
Years of education of parents	–	1.04 (.02)*	–
<b>Human capital and productivity</b>			
# publications (all) log	–	1.30 (.19)+	–
# publications (SCI) log	–	–	1.43 (.17)**
Age at habilitation	.93 (.03)*	.92 (.02)**	.91 (.03)**
Research (%) workload	1.02 (.01)**	–	–
Applied mathematics	2.05 (.41)***	–	–
<b>Academic social capital</b>			
Mentor, high reputation (index) <sup>b</sup>	2.53 (.70)***	1.86 (.52)*	–
Mentor is co-author (dummy)	.70 (.15)+	1.28 (.25)	–
<b>Private social capital</b>			
Married	.58 (.11)**	–	–
Household (%) total	–	.99 (.01)+	.99 (.01)+
<b>Institutional capital</b>			
DFG research ranking (1=Top20)	–	–	1.42 (.38)
Likelihood-Ratio $\chi^2$	48.01***	33.78***	22.67***
# complete cases	180	151	113
# cases	218	173	139

Significance: + < .10; \* < .05; \*\* < .01; \*\*\* < .001

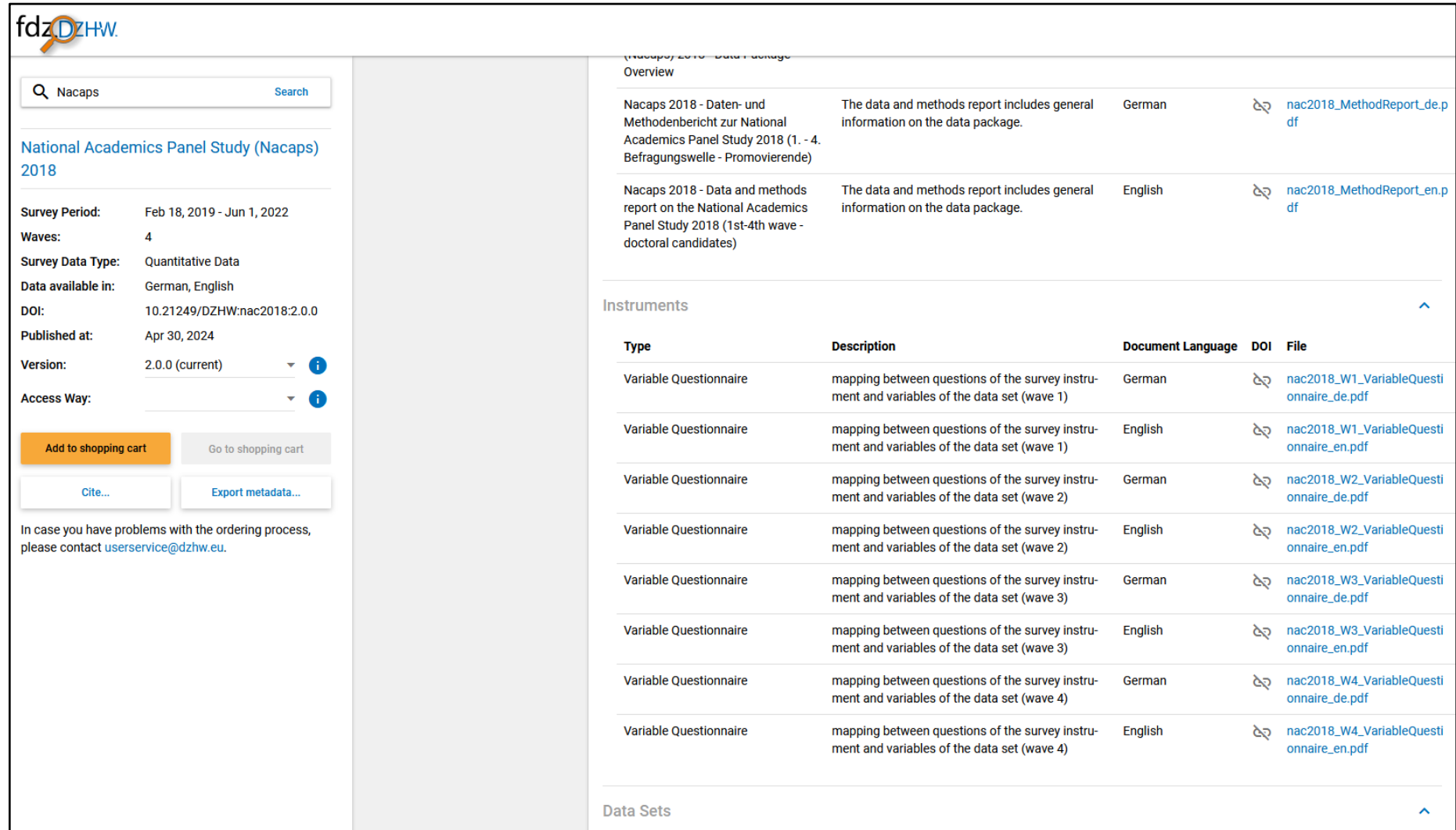
<sup>a</sup> Ref. habilitation cohort 1985–1995

<sup>b</sup> 0–1-standardised index from 3 items (1–5): "My mentor has a high reputation in the scientific community." "My mentor has plenty of contacts in the scientific community." "My mentor often introduced me to her/his contact persons." (Cronbach's alpha = 0.75).

No coefficients: variable omitted.

## Questionnaires of other surveys

- [Google data set search](#)
- Research Data Centres
  - Search for studies or survey instruments
- Survey websites
  - Specific or large-scale surveys (e.g. [ALLBUS](#), [ESS](#), [SOEP](#), [NEPS](#), [SHARE](#))
- Contact researcher



fdz DZHW

Search Nacaps

National Academics Panel Study (Nacaps) 2018

Survey Period: Feb 18, 2019 - Jun 1, 2022  
Waves: 4  
Survey Data Type: Quantitative Data  
Data available in: German, English  
DOI: 10.21249/DZHW:nac2018:2.0.0  
Published at: Apr 30, 2024  
Version: 2.0.0 (current)  
Access Way:

Add to shopping cart Go to shopping cart

Cite... Export metadata...

In case you have problems with the ordering process, please contact [userservice@dzhw.eu](mailto:userservice@dzhw.eu).

(Nacaps) 2018 - Data Package Overview

Nacaps 2018 - Daten- und Methodenbericht zur National Academics Panel Study 2018 (1. - 4. Befragungswelle - Promovierende)	The data and methods report includes general information on the data package.	German	<a href="#">nac2018_MethodReport_de.pdf</a>
Nacaps 2018 - Data and methods report on the National Academics Panel Study 2018 (1st-4th wave - doctoral candidates)	The data and methods report includes general information on the data package.	English	<a href="#">nac2018_MethodReport_en.pdf</a>

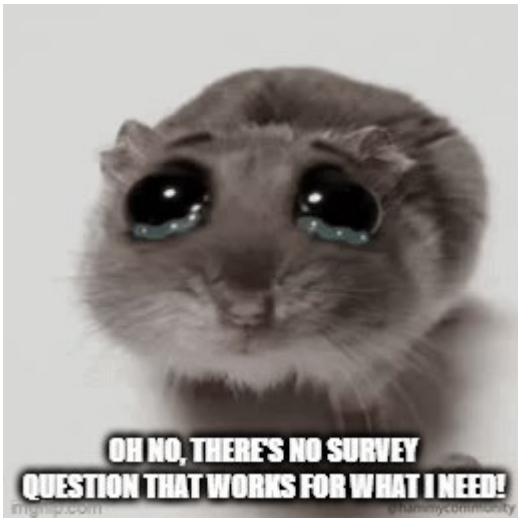
Instruments

Type	Description	Document Language	DOI	File
Variable Questionnaire	mapping between questions of the survey instrument and variables of the data set (wave 1)	German	<a href="#">nac2018_W1_VariableQuestionnaire_de.pdf</a>	
Variable Questionnaire	mapping between questions of the survey instrument and variables of the data set (wave 1)	English	<a href="#">nac2018_W1_VariableQuestionnaire_en.pdf</a>	
Variable Questionnaire	mapping between questions of the survey instrument and variables of the data set (wave 2)	German	<a href="#">nac2018_W2_VariableQuestionnaire_de.pdf</a>	
Variable Questionnaire	mapping between questions of the survey instrument and variables of the data set (wave 2)	English	<a href="#">nac2018_W2_VariableQuestionnaire_en.pdf</a>	
Variable Questionnaire	mapping between questions of the survey instrument and variables of the data set (wave 3)	German	<a href="#">nac2018_W3_VariableQuestionnaire_de.pdf</a>	
Variable Questionnaire	mapping between questions of the survey instrument and variables of the data set (wave 3)	English	<a href="#">nac2018_W3_VariableQuestionnaire_en.pdf</a>	
Variable Questionnaire	mapping between questions of the survey instrument and variables of the data set (wave 4)	German	<a href="#">nac2018_W4_VariableQuestionnaire_de.pdf</a>	
Variable Questionnaire	mapping between questions of the survey instrument and variables of the data set (wave 4)	English	<a href="#">nac2018_W4_VariableQuestionnaire_en.pdf</a>	

Data Sets



## Adopt vs. Adapt





Meme using the "Crying Hamster" reaction image format.  
Created by @HammyCommunity, captured via imgflip.com.  
Retrieved June 25, 2025.

**Adopt:** Take the instrument as it is

**Adapt:** Take and modify the instrument to suit your needs

5.15 Do you work in a position in which ...

	first position	current position
a university degree is essential (e.g. doctor, pharmacologist, teacher)? .....	<input type="radio"/>	<input type="radio"/>
a university degree is the general rule? .....	<input type="radio"/>	<input type="radio"/>
a university degree is not the general rule, but an advantage? .....	<input type="radio"/>	<input type="radio"/>
a university degree is irrelevant? .....	<input type="radio"/>	<input type="radio"/>

nacaps   A B C D

Is/Was a doctorate necessary for your current/last activity?

☐ Necessary

☐ Not necessary, but usual

☐ Not usual, but advantageous

☐ Not usual and rather of disadvantage

☐ Irrelevant

Deutsches Zentrum für Hochschul- und Wissenschaftsforschung GmbH



## What to consider?

- Questions that work well in one (cultural or linguistic) context **may not translate** effectively into another
- Modifying questions can **affect their reliability and validity** and they might capture a different construct or concept
  - Conduct a pilot study to test the adopted/adapted questions with a small sample of your target population
- The instrument may be subject to **copyright or licensing terms**, and its use may be subject to **fees** (common in medicine/psychology).

# **Ethics And Data Protection**

## Why is it important to think about it?

- **Legal Compliance:** Designing questionnaires with data protection and ethics in mind helps ensure that all data collection processes are lawful, reducing the risk of penalties for non-compliance.
- **Building Trust:** Compliant practices show respondents that their privacy is respected, which can lead to higher response rates and better-quality data.
- **Consequences for your Project:** Failure to comply with data protection regulations or poor implementation can negatively impact the research project (e.g., deletion of survey data)

## Disclaimer



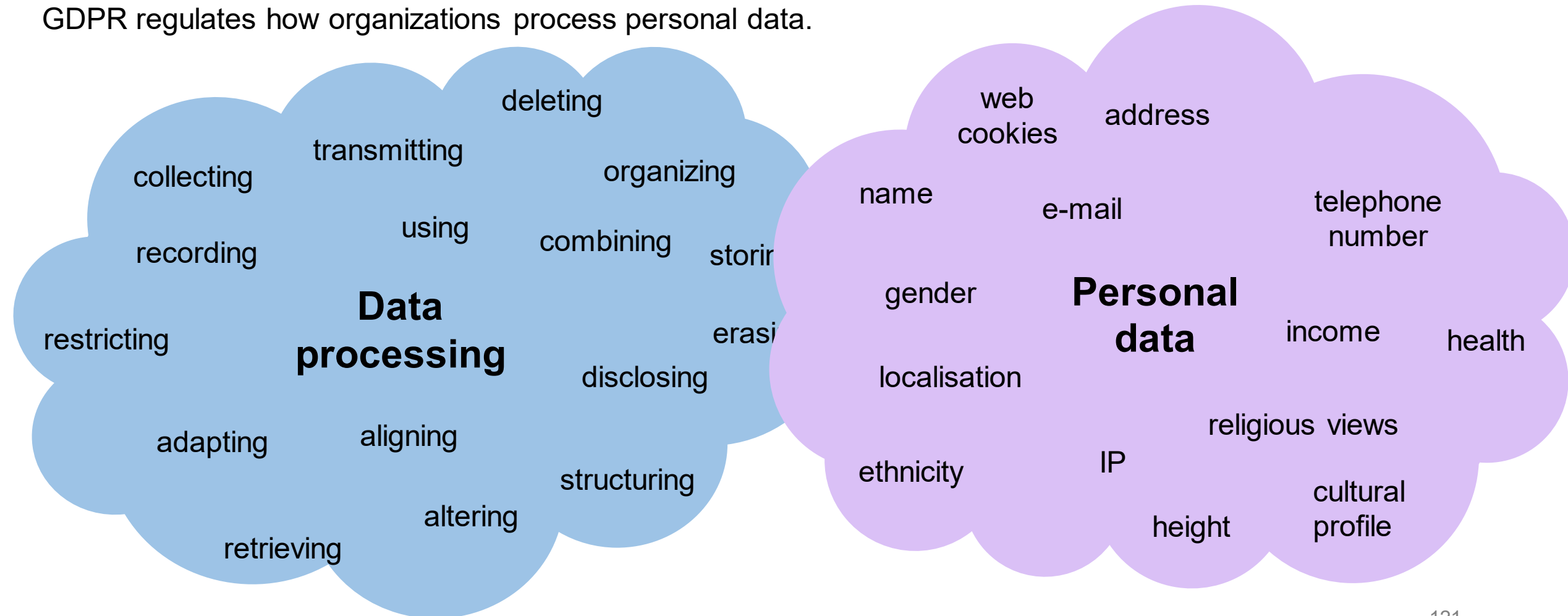
Meme using the "Surprised Koala" template. Caption via Imgflip.com. Retrieved June 30, 2025.

I'm not a lawyer!



## EU's General Data Protection Regulation (GDPR)

GDPR regulates how organizations process personal data.



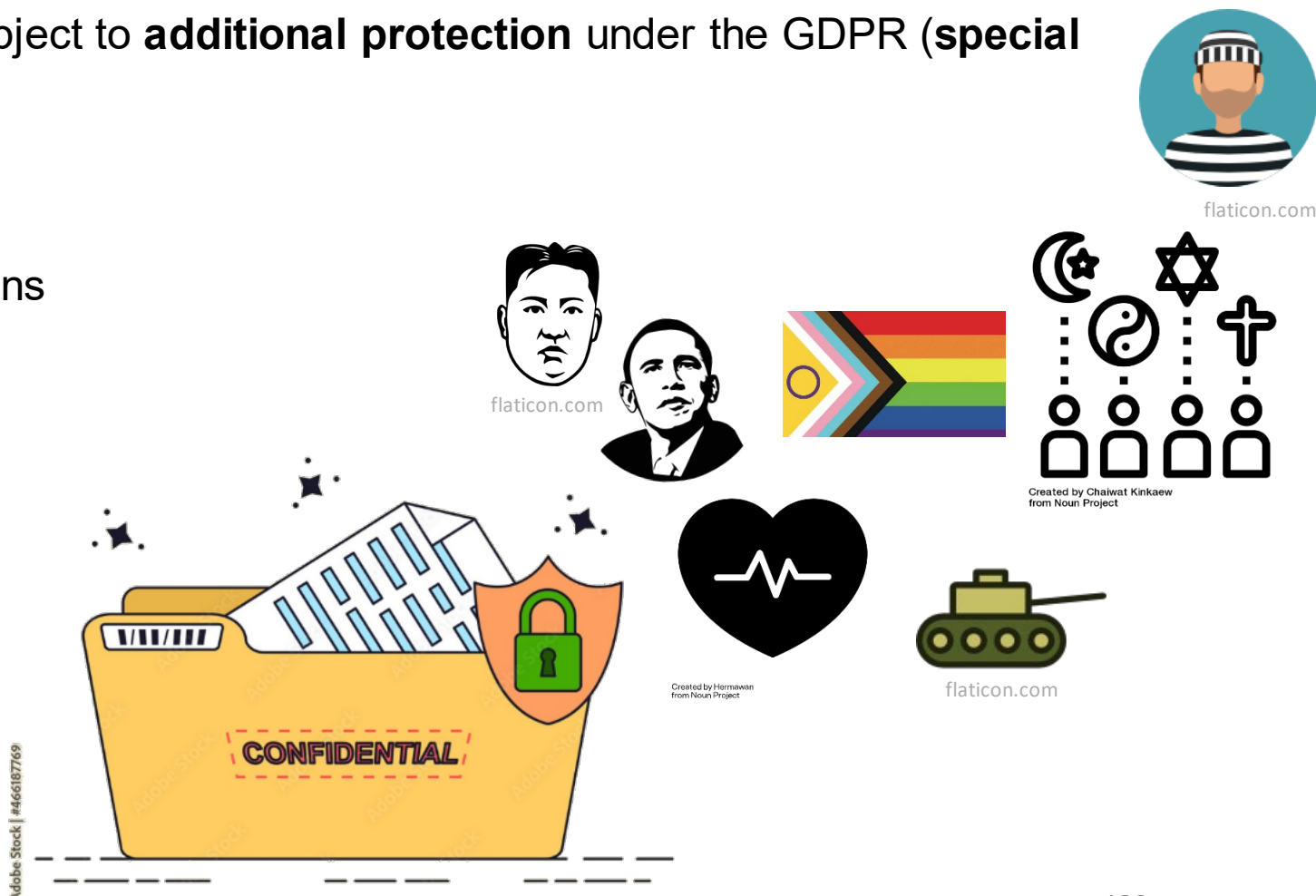


## Sensitive personal data

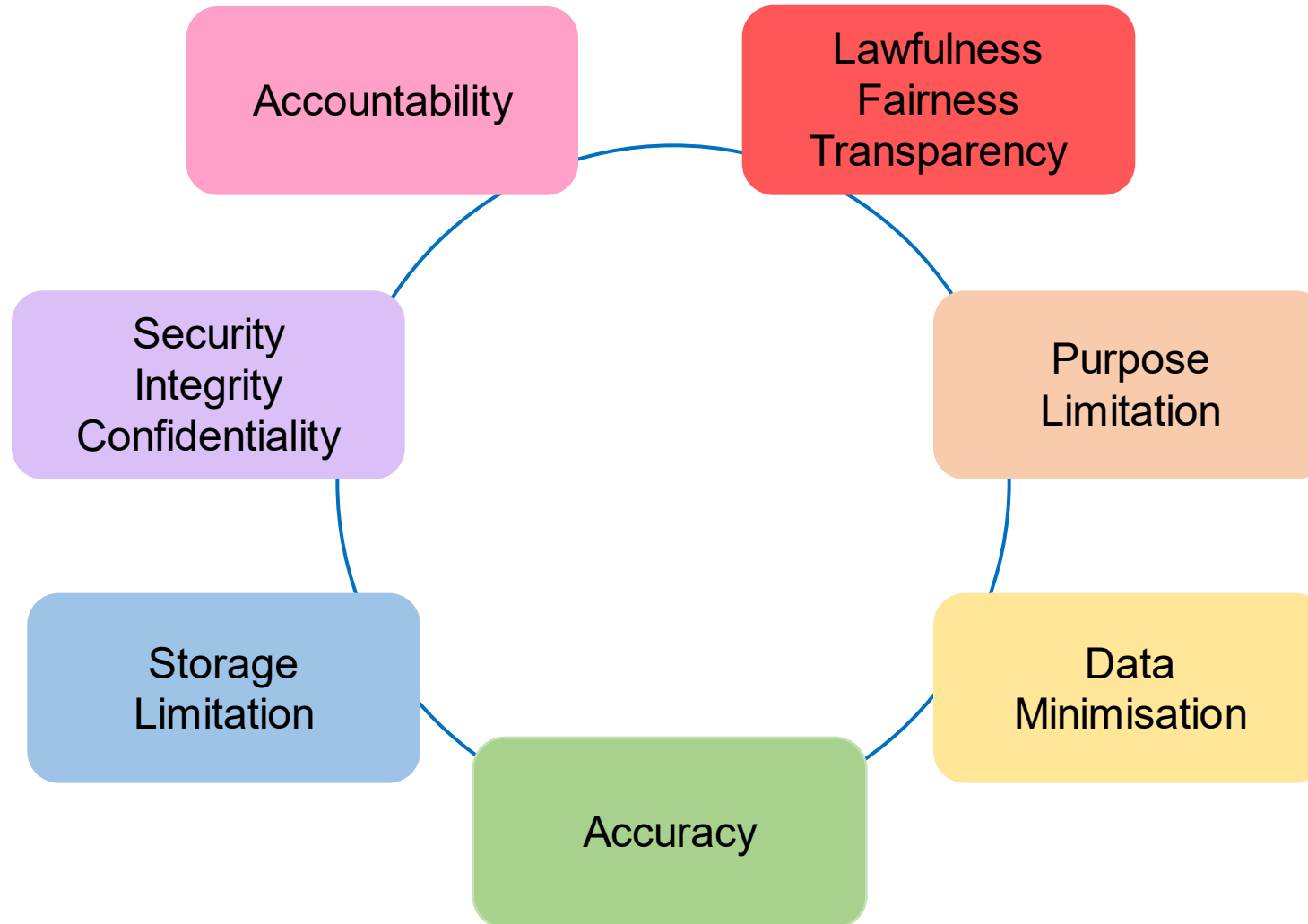
Certain types of sensitive personal data are subject to **additional protection** under the GDPR (**special category data** according to Art 9 + 10 GDPR)

- Ethnic origin
- Religious or philosophical beliefs
- Trade union membership and political opinions
- Sex life or sexual orientation
- Health information
- Genetic and biometric data for identification
- Crime records

Applies also to **circumstantial personal information** (e.g. name-specific data relating to the spouse, cohabitee or partner of a person) when it indirectly discloses the above mentioned information.



## GDPR Principles in data processing



## Legal basis for data processing

### Legislation

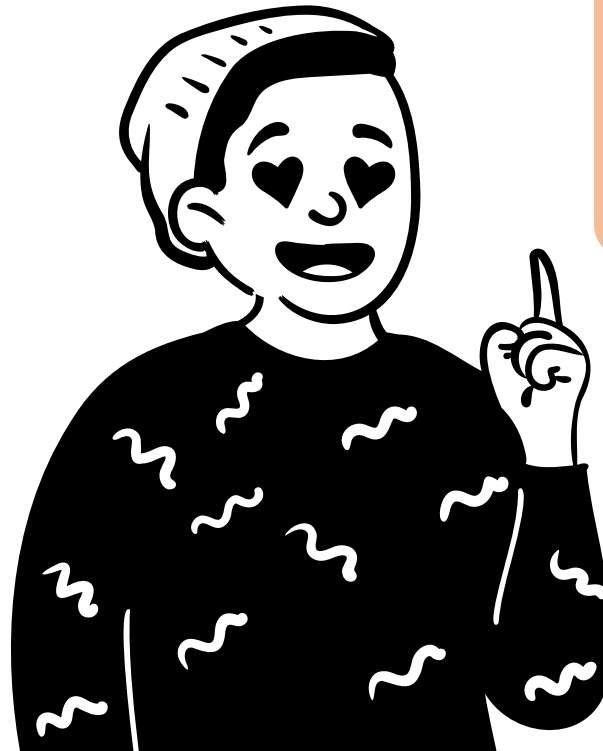


There is a statutory provision that permits (or mandates) data processing

### Consent



The individual has given clear consent for their data to be processed for a specific purpose



## What to consider in questionnaire design?

### Data Minimization

Collect only the data that is **strictly necessary** for the purpose of the study.

### Transparency and Information

Clearly define and **communicate** the purpose of data collection.

- Respondents should understand why their data is being collected and how it will be used.

### Consent

**Obtain clear and explicit consent** from respondents, especially if you are collecting sensitive personal data. Ensure that they can **withdraw** consent at any time, and provide a simple way to do so.

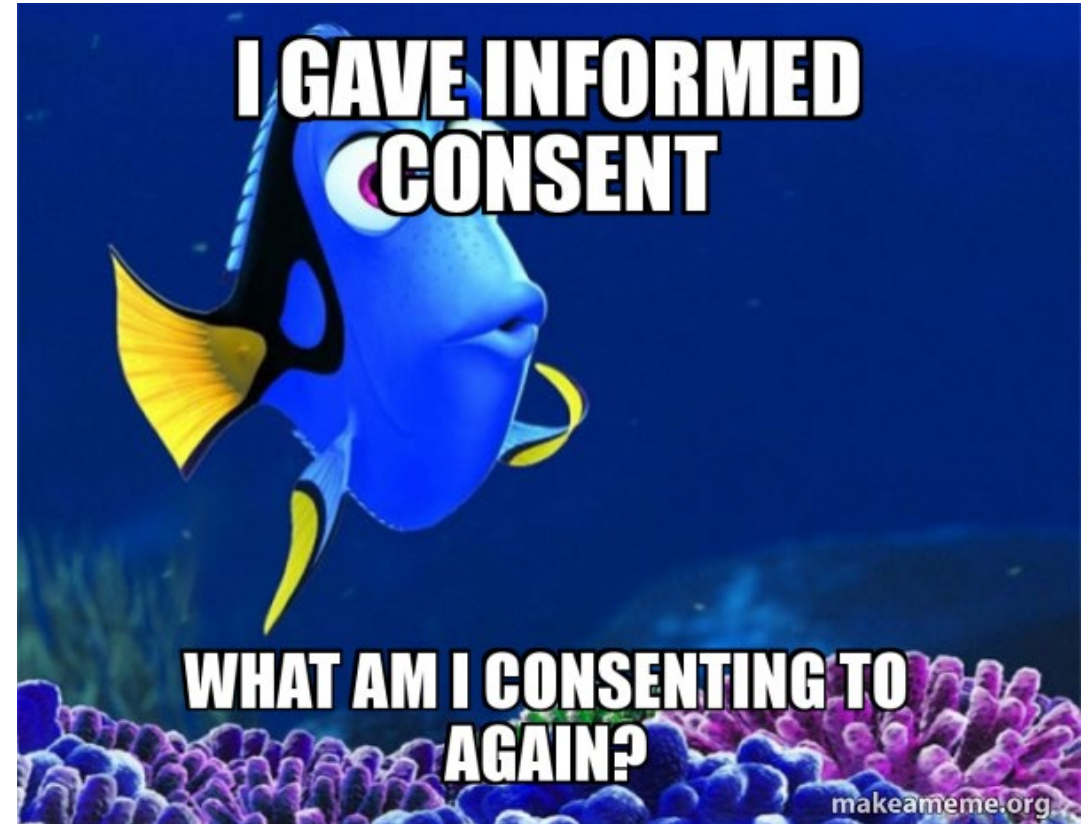
### Third-Party Processors

If any third-party tools or platforms are used to collect, process, or store data (e.g., survey software), ensure that they **comply with GDPR** and have adequate data protection measures in place.

## Informed consent

Information for data subjects about data processing (Art. 13, 14 GDPR)

- **Responsible entity** (name and contact details) / contact details of the **data protection officer**
- What **categories of personal data** are being processed?
- For what **purpose** is the data being processed?
- On what **legal basis** is the data processing taking place?
- Which **groups of recipients** have access to the data?
- When will the data be **deleted or anonymized**?
- If applicable, information on **data transfer outside the EU**
- Information on **data subjects' rights** under GDPR (access, deletion, etc.)



Unknown creator (n.d.). *I gave informed consent, but I didn't understand a thing* [Meme]. Retrieved June 30, 2025, from <https://makeameme.org/meme/i-gave-informed>





## Ressources

### For U Bremen employees

**Katja Losch-Kremer**

[katja.losch-kremer@vw.uni-Bremen.de](mailto:katja.losch-kremer@vw.uni-Bremen.de)

Consulting on Data Protection Rights  
Data Protection Officer

[Information portal on data protection and information security](#)

- Templates
- Checklist “Data Protection for Research Projects” (DE/EN)

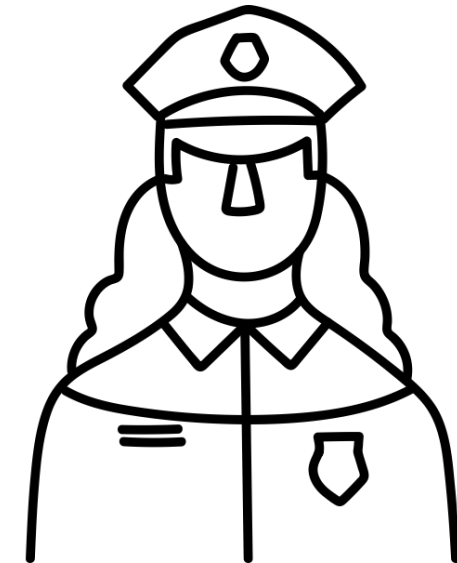
### ... and More

[RatSWD Data Protection Guide](#)

[RatSWD Informed Consent Documents](#)

[VerbundFDB Information and Templates \(also for minors\)](#)

[BERD@BW Virtual Assistant Tool](#)



Created by Lara  
from Noun Project

## What else to consider in ethical questionnaire design?

### Avoiding Harm and Distress

- **Assess questions** for any topics that may be sensitive, intrusive, or distressing.
- If sensitive topics are necessary, use **neutral**, non-judgmental wording and place these questions **later in the questionnaire** after building rapport.
- Provide a **trigger warning** and a **skip option** or “prefer not to answer” response for sensitive questions

### Deception

- Be honest about the **purpose of the study**, the nature of the questions, and any sponsorship or affiliation.
- If some level of deception is necessary for the study design (e.g., masking certain hypotheses), obtain **prior approval** from an ethics review board and **debrief participants afterward**.

## What else to consider in ethical questionnaire design?

### Inclusion

- Ensure that questions are designed to be **inclusive and respectful** of all demographic groups, avoiding language that might alienate or marginalize certain populations.
- If certain groups are being **excluded from participation**, provide a clear, ethical rationale for this in the research protocol.

### Cultural Sensitivity

- Review questionnaire language and content for **cultural relevance and appropriateness**, especially in cross-cultural research
- When translating questionnaires, use **professional translators** familiar with cultural nuances to maintain the original meaning



## Ressources

### For U Bremen employees

#### Ethics review board

[Link](#) (in German)

#### [Information portal on data protection and information security](#)

- Templates
- Checklist “Data Protection for Research Projects” (DE/EN)

### ... and More

[RatSWD Interdisciplinary & discipline-specific Information and guidelines](#)



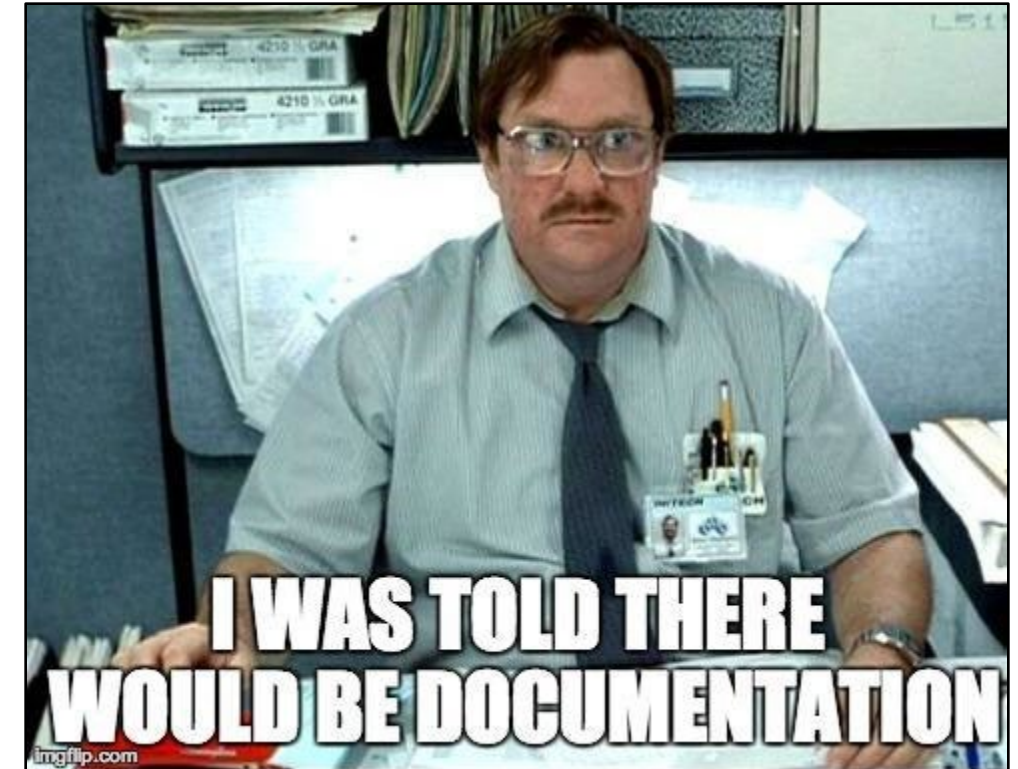
Created by Mia Elysia  
from Noun Project



# Documentation

## Why is it important to think about it?

- Allows others (e.g., collaborators, reviewers, or stakeholders) or future you to **understand the rationale** behind design choices and changes
- **Tracks changes** and secures against data loss
- Provides context for **interpreting results** accurately
- Enables researchers to **assess** what worked well and consider alternative approaches for future projects
- Provides the necessary details that **reviewers and funders** look for when evaluating the study
- Documents **compliance** with data protection laws (like GDPR) and ethical considerations
- Provides information and material for **publishing** and **reusing** the data



Drata. (2023). "I was told there would be documentation" meme. Retrieved June 30, 2025, from <https://drata.com/blog/compliance-memes>

## What documents are needed?

- Measurement instrument documentations
- Translation
- Pretesting
  - Interview guidelines
  - Transcripts
  - Results (reports, analysis scripts and outcomes)
- Variable questionnaire, Layout version (e.g. screenshots)
- Flowchart
- Codebook
- Informed consent, checklist data protection
- Invitation letters, reminders
- Mode-specific documents (e.g. interviewer instructions, survey platform used)



## Measurement instrument documentation

- Information on the **measurement instrument** (instructions, items, response specifications)
- **Theoretical** background
- **Development** process
  - Item generation and selection (sources, selection criteria, pretests conducted, translation)
  - Item analyses (central tendencies, spread of data, dimensionality)
- **Quality** (reliability, validity)
- May be extended into a publication

[Gesis Guideline Documenting Measurement Instruments for the Social and Behavioral Sciences](#)

[RatSWD Guidelines on Quality Standards for Measurement Instruments](#)

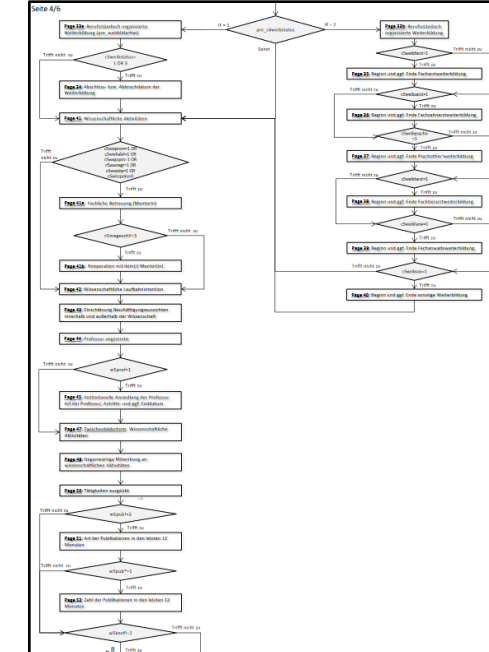
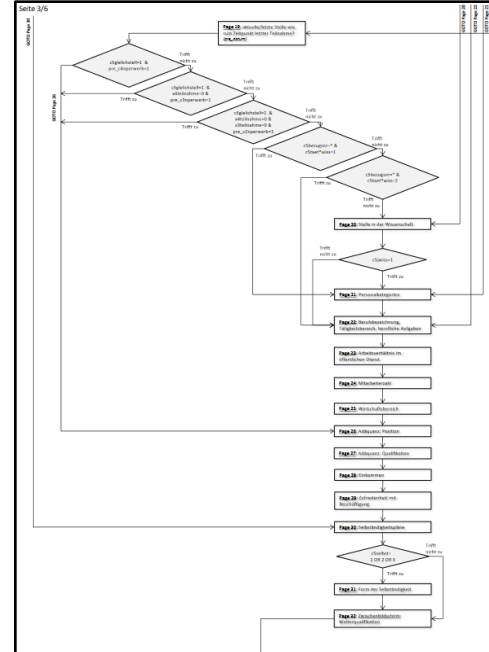
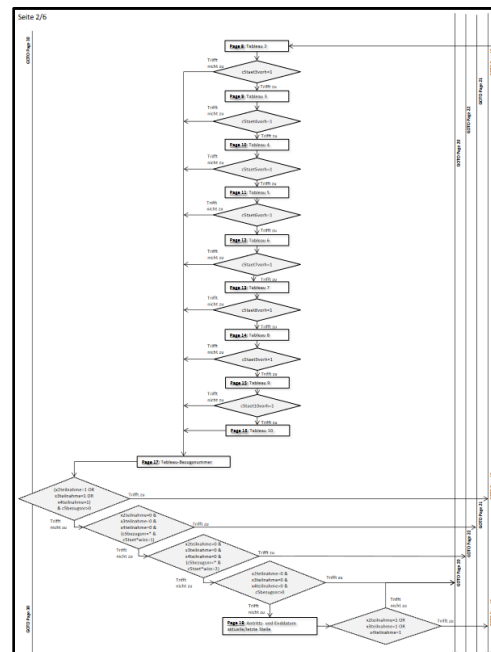
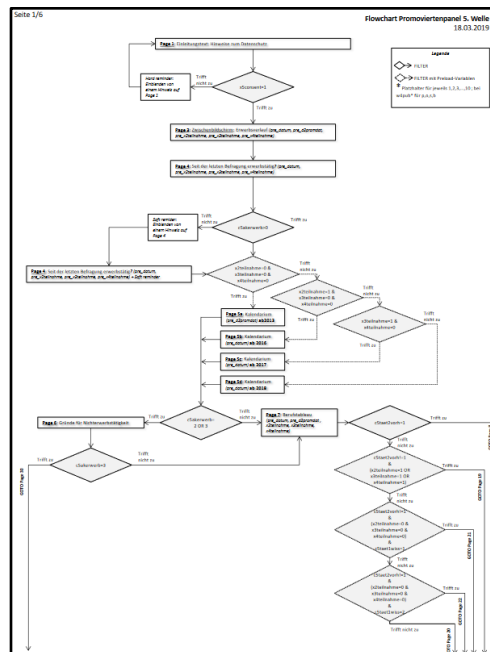
[Gesis Guideline on Documenting Survey Translation](#)



## Flowchart

Visual tool that maps out the **structure and logical flow** of a questionnaire

- Sequence of questions
- Skip patterns or branching logic
- Visible condition
- Randomisation and rotation



German Centre for Higher Education Research and Science Studies  
(2024). DZHW PhD Panel 2014 - Survey 1. Data collection: 2015. Hanover:  
FDZ-DZHW.10.21249/DZHW:phd2014:4.0.0. Question Flow (5th wave -  
German)



## Variable questionnaire and layout version

### A5

[if {A1 („PhD/doctorate status“) = 1 („doctorate“) or 3 („interrupted“)} and preload01 („university“) = everyone]

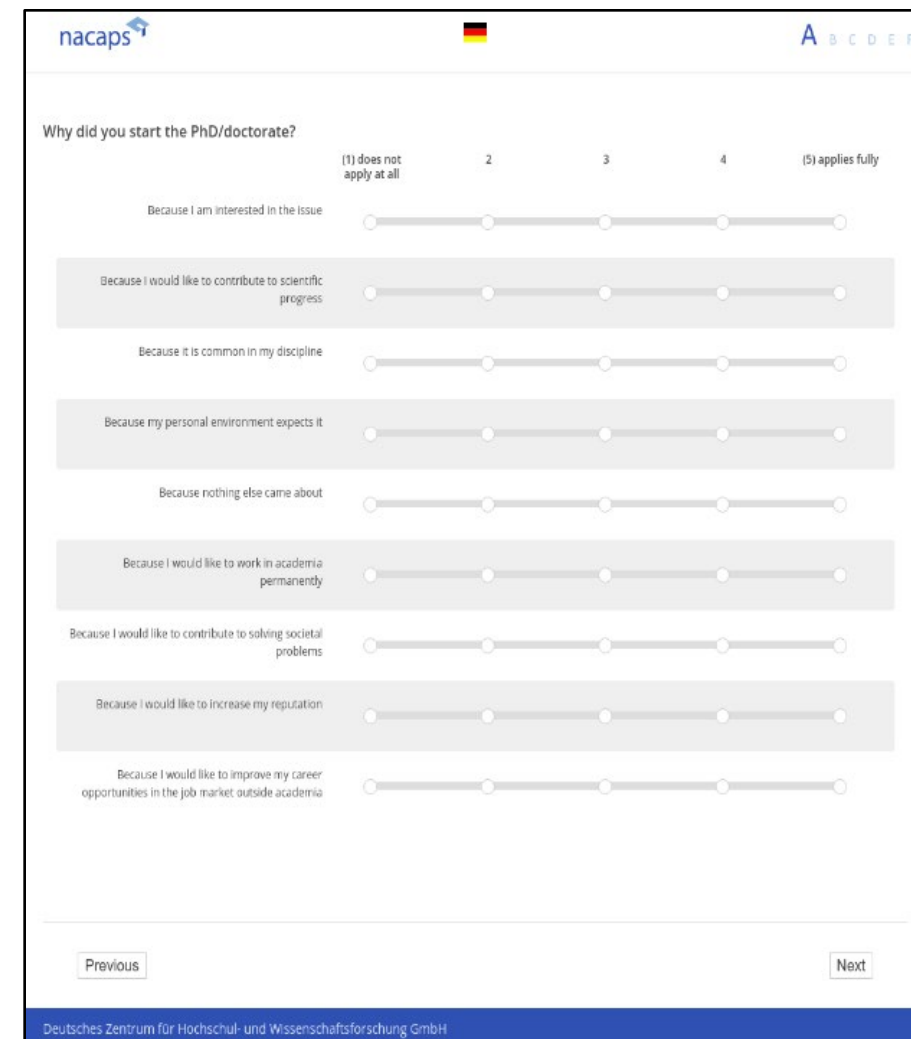
[Visible condition: if {A1 („PhD/doctorate status“) = 1 („doctorate“) or 3 („interrupted“)}]

**Why did you start the PhD/doctorate?**

	does not apply at all					applies fully	
	1	2	3	4	5		
Because I am interested in the issue	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		[adtc01a]
Because I would like to contribute to scientific progress	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		[adtc01b]
Because it is common in my discipline	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		[adtc01c]
Because my personal environment expects it	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		[adtc01d]
Because nothing else came about	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		[adtc01e]
Because I would like to work in academia permanently	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		[adtc01f]
Because I would like to contribute to solving societal problems	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		[adtc01g]
Because I would like to increase my reputation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		[adtc01h]
Because I would like to improve my career opportunities in the job market outside academia	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		[adtc01i]

A5: Outlet filter

GOTO A6



## Version control

**Records changes made in a file** or set of files over time, so that you and your collaborators

- can **track** their history
- **review** any changes
- **revert** or go back to earlier versions

### How?

- Use **continuous numbering**
- Include date and **version number** in the file names
- Use a **version control table**
- Save versions of **milestones**
- **version control software** (e. g. Git and Github)

Status	Version	Author	Date	Changes
Draft	v0.1	Name Surname Email	20200115	First draft
Draft	V2.0	Name Surname Email	20200120	Inserted images and tables
Final	V1.0	Name Surname Email	20200130	Inserted references and typos correction
Approved	V1.0	Name Surname Email	20200205	Approved by XX

ELIXIR Belgium (n. d). Version control table. Retrieved June 30, 2025, from [https://rdm.elixir-belgium.org/version\\_control](https://rdm.elixir-belgium.org/version_control)

# Describe your data with metadata

What do these variables mean?

Which questions were asked?

Who was surveyed here? What is the population?

What is the study about? Who conducted it?

How were the data collected?

What do these codes mean?

	v1	v2	v3	v4						v11	v12	v13	v14	v15	v16	
1	1.040e+14	4	26	104012						1040	1040	1	6	1	5	5
2	1.040e+14	1	19	104008	99	2	1943		99	99	99	1	1	6	4	5
3	1.040e+14	4	98	104003	99	1	1990	1	99	99	99	1	6			
4	1.040e+14	2	98	104010	99	1	1983	2	1756	1040	1040	1	6			
5	1.040e+14	1	18	104007	99	2	1927	1	99	99	99	1	1			
6	1.040e+14	2	19	104007	99	1	1983	1	99	99	99	1	6			
7	1.040e+14					2	1970	1	99	99	99	1	1			
8	1.040e+14					1	1942	1	99	99	99	2	1			
9	1.040e+14					1	1965	2	1040	1276	1040	7	4			
10	1.040e+14					2	1955	1	99	99	99	1	1			
11	1.040e+14					2	7777					1	6	77	77	
12	1.040e+14					2	1938					3	6	5	5	
13	1.040e+14					1	1945					1	6	5	4	
14	1.040e+14					2	1949					4	6	5	5	
15	1.040e+14	2	19	104009		2	7777					1	2	4	5	
16	1.040e+14	4	32	104007		1	1974					6	2	5	5	
17	1.040e+14	4	98	104006	99	1	7777					6	3	99	11	
18	1.040e+14	4	25	104010	99	2	1968					1	2	5	1	
19	1.040e+14	4	40	104007	99	1	1967					1	2	6	2	
20	1.040e+14	1	23	104004	99	1	1932	1		99	99	1	1	6	4	3
21	1.040e+14	2	18	104003	99	2	1965		99	99	99	1	6	2	5	5
22	1.040e+14	1	27	104011	99	1	1951	1	99	99	99	2	1	1	5	2
23	1.040e+14	4	18	104004	99	2	1923	1	99	99	99	1	3	6	3	3
24	1.040e+14	1	19	104006	99	2	1952	1	99	99	99	1	4	2	5	3
25	1.040e+14	3	16	104004	99	2	1947	2	1276	1040	1040	1	1	6	3	3

Who was here? What population?

How were the data collected?

What do these codes mean?

Leahey, A. (2023). Dataverse Data Explorer 2.0: Analyse and Reuse Data in Your Repository. Dataverse Workshop April 17, 2023. (p. 8). Harvard. Retrieved June 30, 2025, from [https://projects.iq.harvard.edu/sites/projects.iq.harvard.edu/files/dataverseorg/files/dataverse\\_data\\_explorer\\_2.0\\_analyse\\_and\\_reuse\\_data\\_in\\_your\\_repository.pdf](https://projects.iq.harvard.edu/sites/projects.iq.harvard.edu/files/dataverseorg/files/dataverse_data_explorer_2.0_analyse_and_reuse_data_in_your_repository.pdf)

## Metadata

Provides **structured information** about the **primary data set**

- include all the information necessary to **verify and reproduce** the results and interpretations of the study
  - include all the information necessary to assess for **which type of reuse** the primary data set is suitable
- Metadata and data should be **easy to find** for both humans and computers.
- **Machine-readable** metadata are essential for automatic discovery of datasets and services.

DATA



METADATA



Dataedo /cartoon

Piotr@Dataedo

Kononov, P. (2021). Data vs metadata #2. Retrieved June 30, 2025, from <https://dataedo.com/cartoon/data-vs-metadata-2>

## Data Documentation Initiative (DDI)



- Established metadata **standard in the social and economic sciences**
- **Other subjects** may have other [domain-specific metadata standards](#)

Metadata Standards Catalog

SearchSign in

## Metadata Standards Catalog

The RDA Metadata Standards Catalog is a collaborative, open directory of metadata standards applicable to research data. It is offered to the international academic community to help address infrastructure challenges.

Read more details about the scope of the Catalog

Read our terms of use

Read our accessibility statement

Contribute to the Catalog

Explore our API

### Metadata standards, profiles and schemes

Browse by scheme name

Browse by subject

Search



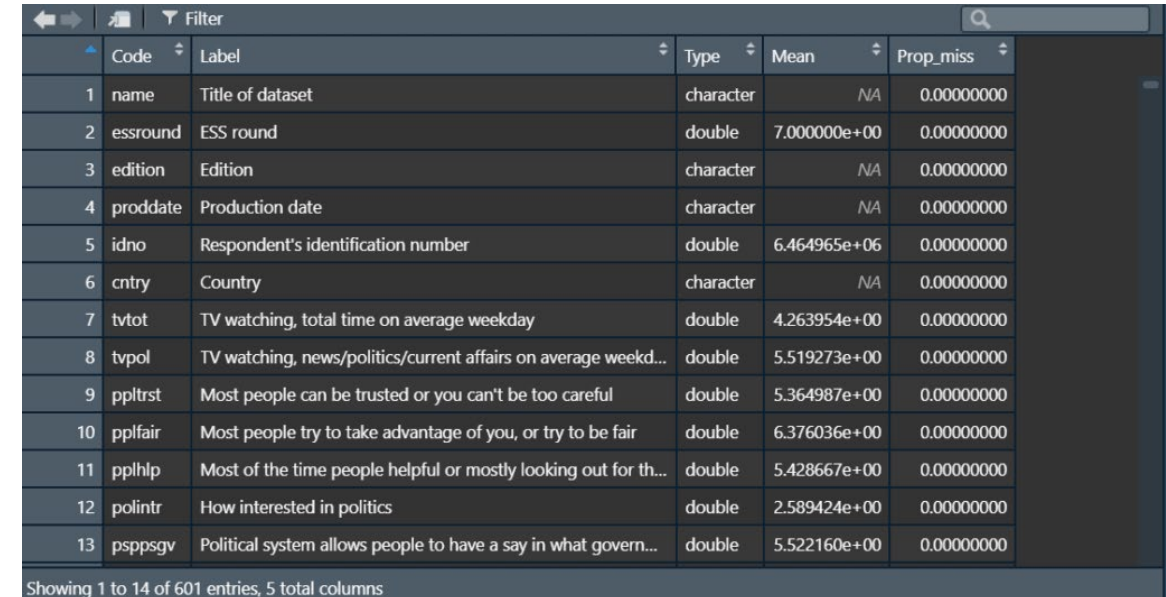
## Codebooks

A well-documented codebook "contains information intended to be complete and self-explanatory for each variable in a data file." (Center for Human Resource Research, 2003)

Core information:

- Variable name, -label, -type
- Valid values, value labels
- Missing values

Additional information can refer to item formulations, instruments, or units of measurement.



	Code	Label	Type	Mean	Prop_miss
1	name	Title of dataset	character	NA	0.00000000
2	essround	ESS round	double	7.000000e+00	0.00000000
3	edition	Edition	character	NA	0.00000000
4	proddate	Production date	character	NA	0.00000000
5	idno	Respondent's identification number	double	6.464965e+06	0.00000000
6	cntry	Country	character	NA	0.00000000
7	tvtot	TV watching, total time on average weekday	double	4.263954e+00	0.00000000
8	tvpol	TV watching, news/politics/current affairs on average weekd...	double	5.519273e+00	0.00000000
9	ppltrst	Most people can be trusted or you can't be too careful	double	5.364987e+00	0.00000000
10	pplfair	Most people try to take advantage of you, or try to be fair	double	6.376036e+00	0.00000000
11	pplhlp	Most of the time people helpful or mostly looking out for th...	double	5.428667e+00	0.00000000
12	polintr	How interested in politics	double	2.589424e+00	0.00000000
13	pspsgv	Political system allows people to have a say in what govern...	double	5.522160e+00	0.00000000

Showing 1 to 14 of 601 entries, 5 total columns

Cernat, A. (n.d.). An easy way to make a codebook in R. Retrieved June 30, 2025, from <https://www.alexcernat.com/easy-way-to-make-a-codebook-in-r/>

## More Infos

### [Cookbook for a Codebook](#)

### [DDI Codebook](#) [Examples of DDI codebooks](#)

There are also R-packages, for example, that can be helpful in the automatic creation of DDI codebooks (DDIwR, rddi)

## Nacaps metadata

## Mode-specific documents

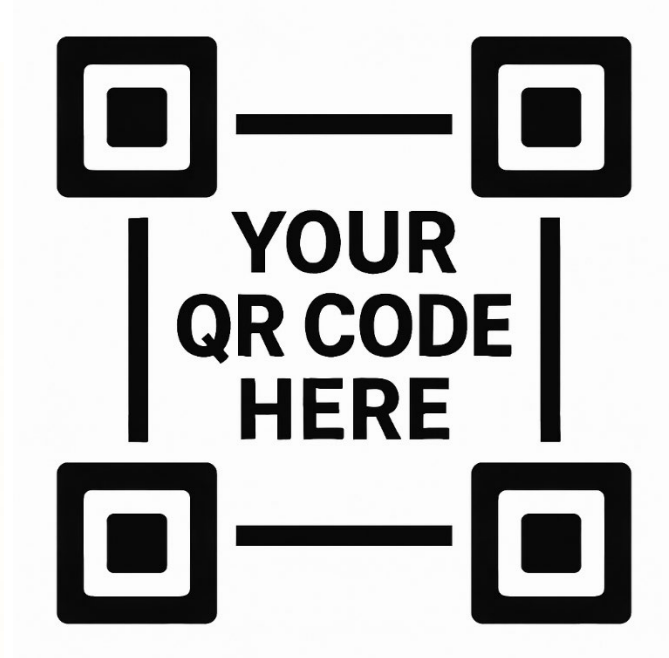
[Gesis Guidelines on Documentation of Fieldwork](#)



# Getting Started



## Gosh, where should I start?



Visit  
[www.menti.com](https://www.menti.com)

Enter code



## Recommended order

- ✓ Develop your research question, hypotheses and analysis strategy.
- ✓ Define the target respondents.
- ✓ Choose the method(s) of reaching your target respondents.
- ✓ Decide on question content and scale level.
- ✓ Search for existing instruments to adopt or adapt.
- ✓ Develop the remaining question wording.
- ✓ Put questions into a meaningful order and format.
- ✓ Check the length of the questionnaire.
- ✓ Pretest the questionnaire.
- ✓ Revise the questionnaire.
- ✓ Develop the final survey form.

# Wrap Up

## Data Quality

Groves, R.; Fowler, F.; Couper, M.; Lepkowski, J.; Singer, E.; Tourangeau, R. (2009). Survey Methodology (2nd Edition). John Wiley & Sons, Inc. ISBN 0-470-46546-8

Danner, D. (2016). [Reliability – The precision of a measurement](#). GESIS Survey Guidelines. Mannheim, Germany: GESIS – Leibniz Institute for the Social Sciences. doi: 10.15465/gesis-sg\_en\_011

Repke, Lydia; Birkenmaier, Lukas; Lechner, Clemens M. (2024). [Validity in Survey Research - From Research Design to Measurement Instruments. Mannheim](#), GESIS – Leibniz-Institute for the Social Sciences (GESIS – Survey Guidelines). DOI: 10.15465/gesis-sg\_en\_048

## Cognitive Pretesting

Lenzner, Timo; Hadler, Patricia; Neuert, Cornelia E. (2024). [Cognitive Pretesting](#). Mannheim, GESIS – Leibniz Institute for the Social Sciences (GESIS – Survey Guidelines). DOI: 10.15465/gesis-sg\_en\_049

## Expert Interviews

Gläser, Jochen/Laudel, Grit (2009): On Interviewing "Good" and "Bad" Experts. In: Bogner, Alexander/Littig, Beate/Menz, Wolfgang (Hrsg.): Interviewing experts. Research methods series. Basingstoke [England], New York: Palgrave Macmillan, S. 117-137.

Bogner, Alexander/Littig, Beate/Menz, Wolfgang (Hrsg.) (2009): Interviewing experts. Research methods series. Basingstoke [England], New York: Palgrave Macmillan.

## Questionnaire Design

Lenzner, T., & Menold, N. (2016). [Question Wording](#). GESIS Survey Guidelines. Mannheim, Germany: GESIS – Leibniz Institute for the Social Sciences. doi: 10.15465/gesis-sg\_en\_017

Menold, N., & Bogner, K. (2016). [Design of Rating Scales in Questionnaires](#). GESIS Survey Guidelines. Mannheim, Germany: GESIS – Leibniz Institute for the Social Sciences. doi: 10.15465/gesis-sg\_en\_015

Züll, C. (2016). [Open-Ended Questions](#). GESIS Survey Guidelines. Mannheim, Germany: GESIS – Leibniz Institute for the Social Sciences. doi: 10.15465/gesis-sg\_en\_002

Nießen, D., Hadler, P., & Neuert, C. (2023). [Questionnaire design decisions when transitioning from an interviewer-administered to a self-administered online mode. Mannheim](#), GESIS – Leibniz Institute for the Social Sciences (GESIS – Survey Guidelines). DOI: 10.15465/gesis-sg\_en\_046

## Questionnaires for Cross-Cultural Surveys

Behr, D., Braun, M., & Dorer, B. (2016). [Measurement instruments in international surveys](#). GESIS Survey Guidelines. Mannheim, Germany: GESIS – Leibniz Institute for the Social Sciences. doi: 10.15465/gesis-sg\_en\_006

Behr, Dorothee (2023). [What to consider and look out for in questionnaire translation](#). Mannheim, GESIS – Leibniz-Institute for the Social Sciences (GESIS – Survey Guidelines). DOI: 10.15465/gesis-sg\_en\_0

Valdez, D. et al. (2021) Translation frameworks and questionnaire design approaches as a component of health research and practice: A discussion and taxonomy of popular translation frameworks and questionnaire design approaches, Social Science & Medicine, 278, 113931, <https://doi.org/10.1016/j.socscimed.2021.113931>.

## Surveying Children

Bell A. (2007). Designing and testing questionnaires for children. Journal of Research in Nursing,;12(5):461-469. doi:10.1177/1744987107079616

De Leeuw, E., Borgers, N., Strijbos-Smits, A. (2002) Children as respondents: developing, evaluating, and testing questionnaires for children. Invited paper presented at the International Conference on Questionnaire Development, Evaluation and Testing Methods, Charleston, South Carolina, November 2002



## Gesis Survey Methodology Consulting



### Survey methods consulting

We provide consultation on survey methods, including the development and translation of survey instruments, survey design and fieldwork, survey statistics, as well as the comparability of survey data. Drawing on our extensive experience and foundational research at GESIS, we offer tailored advice at every stage of the research process to ensure your data achieves the highest possible quality.

[Request consultation](#)

→ Questionnaire design

→ Survey Design

→ Sample Design

→ Weighting and Missing Values

→ Harmonization



#### Who is this service for?

We provide consultation to researchers within the context of research and infrastructure projects, whose outputs benefit the social sciences (e.g., through publications, publicly available data, or validated measurement instruments). Unfortunately, we are unable to offer advice on bachelor's or master's theses.



#### What are the costs?

Short consultations, offered as a form of guidance for self-help, are free of charge. We are also happy to support you with more in-depth, fee-based consulting services. Further details can be found in our pricing overview.

[Consultation fees](#)

### Target audience

- Researchers planning a social science survey
- Not for final theses

### Costs

- Help to help yourself is free
- Charges apply for more in-depth services

More information... [Gesis Website](#)

GESIS – Leibniz Institute for the Social Sciences. (2025). Survey Methods Consulting. Retrieved June 30, 2025, from <https://www.gesis.org/en/consulting/survey-methods-consulting>

## Gesis Training



### What they offer

- Workshops (Cologne/Mannheim/Online)
- Summer School in Survey Methodology
- Spring Seminar

### Pro's and Cons

- They are great!
- ECTS points
- International audience
- Costly

More information... [Gesis Training Website](https://training.gesis.org/)

#### Expert\*inneninterviews

21.05 - 23.05.2025, Köln / Unter Sachsenhausen 6-8

#### Einführung in die Mehrebenen-Strukturgleichungsmodellierung

26.05 - 27.05.2025, Online via Zoom

#### Adapters: Lightweight Machine Learning for Social Science Research

02.06 - 04.06.2025, hybrid (online via Zoom / Unter Sachsenhausen 6-8)

#### Preprocessing and Analyzing Web Tracking Data

02.06 - 03.06.2025, hybrid (online via Zoom / Unter Sachsenhausen 6-8)

#### Einführung in die Längsschnittliche Datenanalyse

23.06 - 24.06.2025, Mannheim B6, 4-5

#### Interactive Data Analysis with Shiny

03.07 - 11.07.2025, Online via Zoom

#### Einführung in Ideen der qualitativen Sozialforschung

07.07 - 08.07.2025, Köln / Unter Sachsenhausen 6-8

#### Geodata and Spatial Regression Analysis

09.07 - 11.07.2025, Mannheim B6, 4-5

#### Design and Methods for Mobile Data Collection

09.07 - 11.07.2025, Online via Zoom

#### Short Course B: Introduction to Stata for Data Management and Analysis

23.07 - 24.07.2025, Hybrid (Online via Zoom / Unter Sachsenhausen 6-8)

#### Short Course A: Introduction to R for Data Analysis

23.07 - 24.07.2025, Cologne / Unter Sachsenhausen 6-8

- **Interdisciplinary and subject-specific workshops**  
(esp. in social sciences, marine and environmental sciences, health sciences, and humanities)
- **On-demand customized training** for graduate programs, departments, etc.

... more on [dsc-ub.de/en/qualification](https://dsc-ub.de/en/qualification)

20.05. **Simplifying Data Science with Galaxy: A Beginner's Workshop**

02.06. **Good Planning, Better Survey Data – Introduction to Web Survey Design**

16.-17.06. **Data Collection Made Easy – Implementing Web Surveys with EUSurvey**

24.06. **Python Quickstart for Quantitative Data**

25.06. **From Data Chaos to Clarity: Essential Strategies for Research Data Management in Qualitative Research**

14-17.07. **Applied Text Mining Using Python**

And many more...

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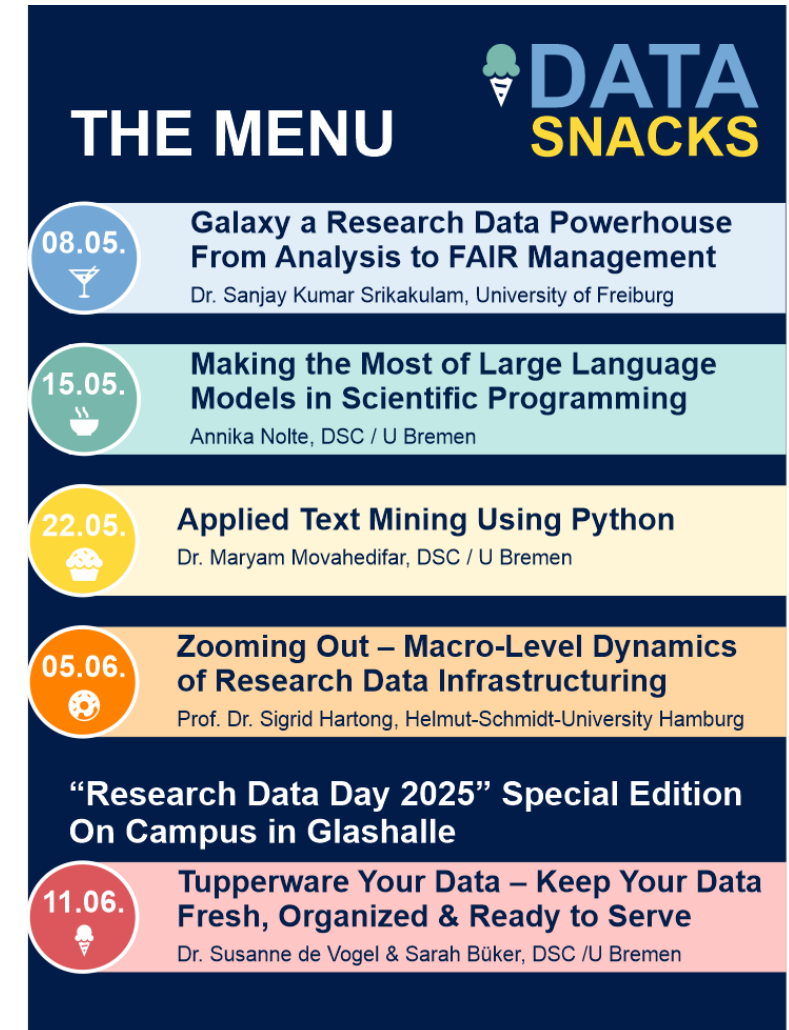
Short and engaging sessions on different “data topics”

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- Free & open for everyone
- Online
- No registration required, just drop in!

More information at:

[https://www.dsc-ub.de/data\\_science\\_forum.php](https://www.dsc-ub.de/data_science_forum.php)





Lisa Jungmann, U Bremen

*How do I prepare my data to apply machine learning?*

*How can I create a data management plan?*

*What do I need to consider when collecting social media data?*



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datanord/newsletter](http://www.bremen-research.de/datanord/newsletter)

- **Monthly Updates!**
- Target group: Researchers and anyone who is interested in our offers
- Overview of DataNord **trainings, networking opportunities and other events** in the next month
- Additional announcements



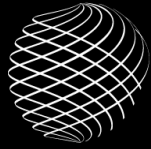
Meme using an image of a baby pygmy hippopotamus. Original photo source unknown; Caption created via Imgflip (Retrieved June 30, 2025)

In the space below please write any overall comments about this course or instructor not covered above.

If I had one hour to live,  
I'd spend it in this  
class because it feels  
like an eternity.

9GAG (via Pinterest). (n.d.). "If you need inspiration on your teacher evaluations..." Retrieved June 30, 2025, from <https://de.pinterest.com/pin/448460075368152788/>





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# Thank You for Your Participation!

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 [dsc-ub.de](http://dsc-ub.de)





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