Lecture 06: Online and face-to-face testing

Running good studies

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Week 6, Let's go!

- Social Psychology Essay Tutorial this week
- Have you done your reading and prepared?
- A word on attendance and independent study

Any Questions?

The Weeks ahead

Every group needs to apply for (and receive) ethical approval prior to the Winter Break. - Review the Ethics Page on the VLE - The same process you will use next year - 1 application per group - pre-approved by Lab Tutors - Planning is required and turnaround is 1 week - We deep dive ethics next week (week 7) - but review the materials in advance

It's time to get practical

'Operationalisation' of variables

Operationalisation of variables requires a consideration of the reliability and validity of the method of operationalisation.

Operationalisation of variables also requires specification of the scale of measurement: nominal, ordinal, interval, or ratio.

Finally, operationalisation of variables can also specify details of the measurement procedure.

See Howitt and Cramer Chapter 3.3 (Box Research Example - Condon & Crano 1988)

Attitude similarity and interpersonal attraction

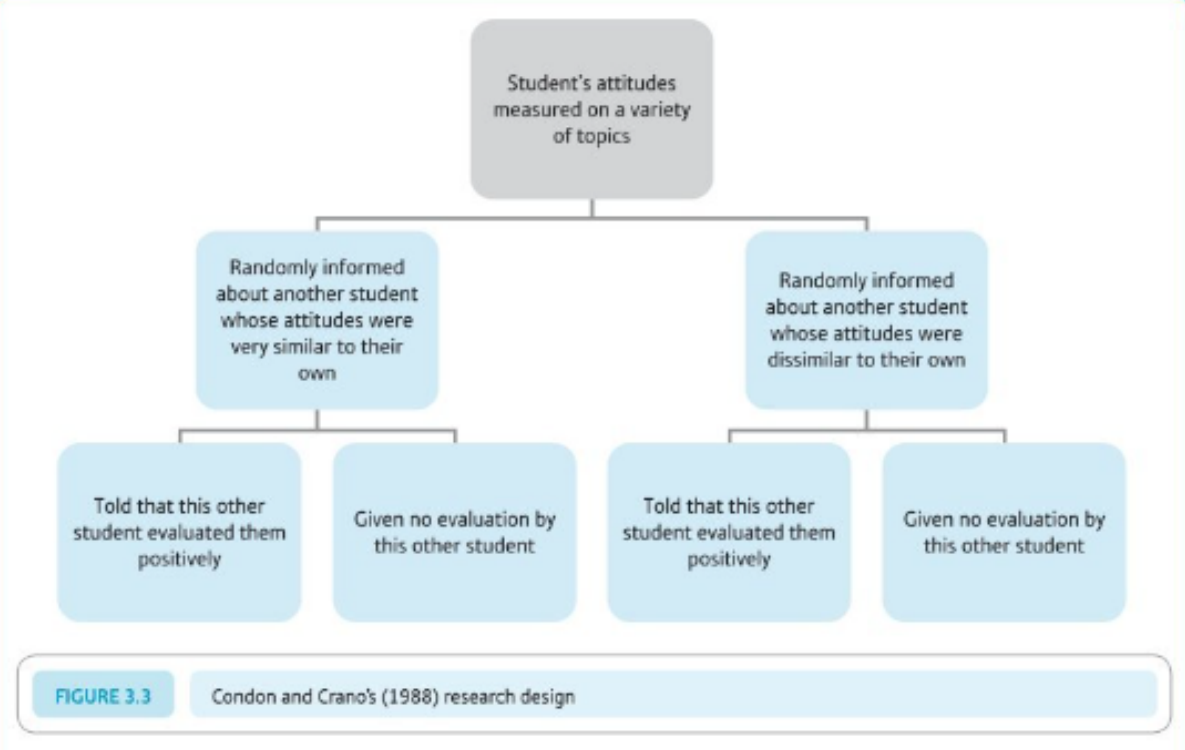

FIGURE 3.3 Condon and Crano's (1988) research design

Their DV (consider pros and cons)

This person would like (dislike) me

This person would like (dislike) working with me in an experiment

The Student Room (question)

☆ WATCH THIS THREAD 6 years ago

How to operationalise these variables??

morgan1302

No matter how hard I try, I can't seem to grasp operationalisation.
Please could someone help me operationalise these variables?
1) Friendliness between two people
2) How fashionable you are
3) How frightening a film is
Thank you so much xx

0 REPORT REPLY

The Student Room (answer 1)

Reply 1 6 years ago

Findlay6
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To operationalise is to tell people how you plan to measure your variables.

How are you going to measure friendliness?
How are you going to measure being fashionable?

EG, With How frightening a film is, you could measure perspiration levels (how much they sweat), and clearly define an amount of sweat to certain level of fear.
10 ml of sweat = very scared.
5 ml of sweat = average scared
1ml of sweat = not scared at all.

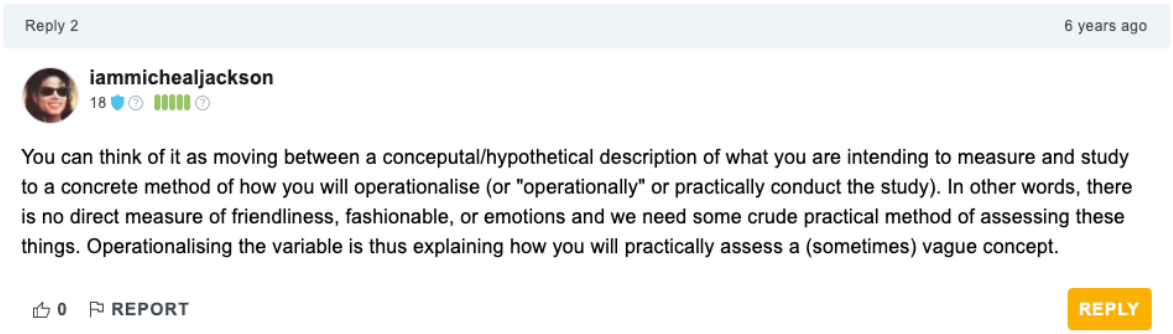
Or measuring heart rate. An increased heart rate would show that they are scared, and it's not something we can easily manipulate, so would be more valid.

Or you could measure how many times they jump during the film.

(edited 6 years ago)

0 REPORT REPLY

The Student Room (answer 2)



Reply 2 6 years ago

iammichealjackson
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You can think of it as moving between a conceptual/hypothetical description of what you are intending to measure and study to a concrete method of how you will operationalise (or "operationally" or practically conduct the study). In other words, there is no direct measure of friendliness, fashionable, or emotions and we need some crude practical method of assessing these things. Operationalising the variable is thus explaining how you will practically assess a (sometimes) vague concept.

0 REPORT REPLY

Of great importance that you reflect on this for your MD too

How have you defined your variables of interest?

- IVs and DVs

How have you measured or categorised your variables of interest?

- e.g. Social Media use
- Gender
- Frequency or low/high extraversion

The research process

Note

- Develop research aims
- Specify research questions/hypotheses related to these aims
- Identify relevant constructs and concepts
- Translate constructs and concepts into variables (i.e., a logical set of characteristics/features)
- Translate variables into measurements (i.e., the quantification of characteristics/features)

Quantitative Research

A systematic examination of relationships between variables

. . .

'Variables' are 'translated' from concepts, constructs or phenomena

. . .

Could be critiqued as 'reductionist'

Types of Variable

Independent Variable

- Experimental - The variable I manipulate
- Non-Experimental / Quasi-Experimental - Comparison between pre-existing groups

Dependent Variable

- The variable you measure, that you propose to be influenced by a manpulation of the IVs
- The [D]ata{.shout}

Types of Measurement

Nominal/Categorical

- Male/Female/...
- Vegan / Vegetarian
- Smoker/Non-Smoker

Types of Measurement

Ordinal

Numbers representing a rank position in a group

Not representative of an actual definite number/score/value - without information about the 'gap' between numbers

- First, second, third
- Tallest/Shortest

Types of Measurement

Interval

Numbers represent equal units giving information about the 'gap' between numbers

- Temperature
- Psychological Scales

Types of Measurement

Ratio

Interval measurements with an absolute zero, of equal units,

- Weight
- Length
- Time/Reaction time*

Median Splits

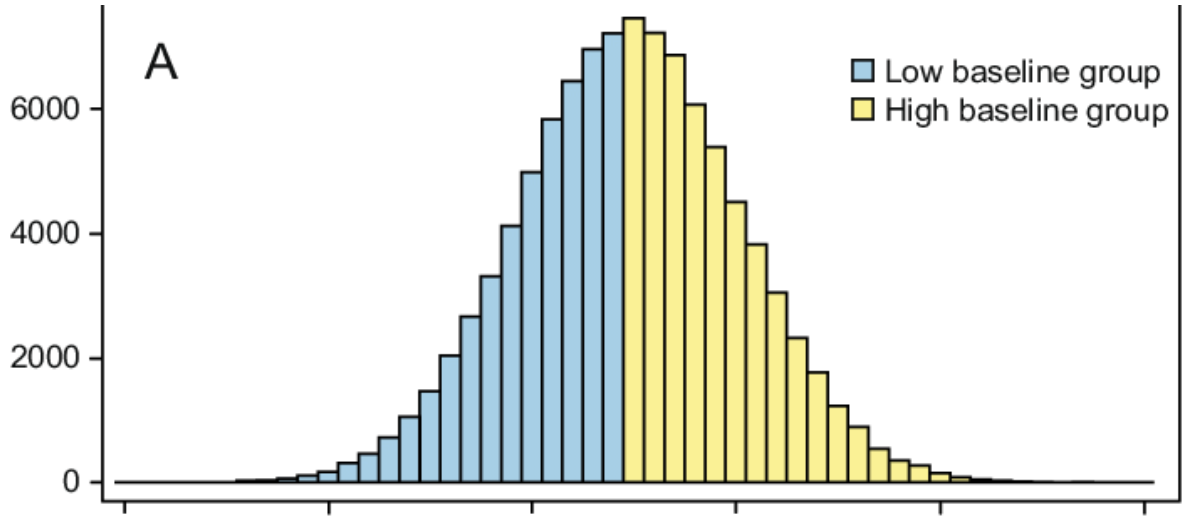
'Cutting' a distribution in half at the mid-point - with 50% on each side of the cut

Median Splits can be considered problematic

> ⚠ Beware!
>
> We often suggest a median split to dichotomise a continuous variable, e.g. for the purposes of creating a 2 level IV.
> It's a useful exercise in calculating a 'computed variable' in SPSS or Jamovi
> It is NOT best-practice usually. Why not?

It is a key learning outcome that you are able to perform a standardised analysis, specifically, the 2x2 ANOVA with any necessary assumption checks and post-hocs + plots

Think about this



Operationalisation, measurement and definitions impact...

Summary of part 1

You should think carefully about:

- How you define your variables - this is probably a part of the introduction that students DON'T think about enough
- How you measure or categorise your variables (IVs and DVs) - this is probably the single thing I look at first when peer-reviewing research!
- How well your manipulation does what it claims to. Does you manipulation bring the thing it proposed to to life well?

Running Experiments online or face to face

Comparing Experiment Modalities

- Online Surveys and Experiments
  - Qualtrics - For surveys, stimulus presentation that don't require accurate timing
  - Gorilla.sc - For 'experimental' tasks with complex stimulus > presentation or that require response time measures or push-button > responses etc.
- Face-to-Face Experiments

Online Surveys and Experiments with Qualtrics

Overview

- A powerful tool for creating and distributing online surveys
- Widely used in psychological research
- We have an institutional licence and so it is FREE
- No specialist support - has excellent online support

Pros of Qualtrics

Accessibility

- Reach a wide, diverse audience (if necessary)
- Accessible by anyone with a phone or laptop etc

Cost-Effective

- Low ‘cost’ compared to face-to-face

Data Management

- Automated data collection, scoring and storage
- Relatively easy to analyze and export data - but not always simple

Customization

- Highly customizable surveys and experiments (video, photos, audio, vignettes)
- Supports various question types and logic

Cons of Qualtrics

Limited Human Interaction

- Lack of personal interaction can affect responses
- You put a huge amount of trust in the participant
- Not always easy to manage ethical challenges properly

Technical Issues

- Dependence on internet connectivity and user tech skills
- An error in the build and you are in trouble ####

Response Authenticity

- Higher risk of dishonest or inattentive responses (maybe?) #### Sampling Bias
- Potential for non-representative samples

Introduction to experiments using Gorilla.sc

Gorilla.sc: highly controlled online Psychological Research

- A comprehensive online tool for behavioral research
- Facilitates creation, deployment, and analysis of experiments

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Core Features of Gorilla.sc

User-Friendly Interface

- Intuitive design for researchers of all levels
- Drag-and-drop experiment builder

Requires ‘tokens’ to run

- You will need to apply for ‘tokens’ to apply for ethics, and to run the study.
- There is usually a limited supply as there is a cost associated with this.

Versatile Experiment Design

- Supports a wide range of experimental paradigms
- Customizable to suit various research needs

Experiment Creation with Gorilla.sc

Building Blocks

- Use ‘widgets’ and ‘tasks’ to construct experiments
- Easily integrate surveys, quizzes, and cognitive tasks

Advanced Customization

- Incorporate complex experimental logic
- Customize with CSS and JavaScript for unique requirements

Data Collection and Analysis

Real-Time Data Collection

- Gather data securely and efficiently
- Access participant responses in real-time

Analytical Tools

- Built-in tools for basic data analysis
- Export data for advanced analysis in other software e.g. SPSS

Collaboration and Sharing

Team Collaboration

- Share experiments and data with team members
- Collaborate on experiment design and analysis

Participant Recruitment

- Still needs to be managed via sources outside of Gorilla

Gorilla.sc in Psychological Research

Broad Application

- Suitable for cognitive, social, and clinical psychology
- Ideal for remote and large-scale studies

Impact on Mini-Dissertations

- Increases the reach of psychological studies requiring complex stimulus or timing
- Not easy to get up and running with this tool
- No specialist support - has excellent templates and online support

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Face-to-Face Experiments

Overview

- Traditional method of conducting experiments
- Involves direct interaction with participants

Pros of Face-to-Face Experiments

Enhanced Interaction

- Direct human interaction enriches data quality

Controlled Environment

- Better control over experimental conditions

Immediate Feedback

- Opportunity for immediate clarification and feedback

Participant Authenticity

- Lower risk of false responses (maybe?)

Cons of Face-to-Face Experiments

Higher Costs

- Greater resource and time investment (maybe?)

Limited Reach

- Restricted to participants' geographical location

Time-Consuming

- Scheduling and conducting sessions takes time

Potential Biases

- Risk of experimenter or social desirability biases

Conclusion

Choosing the Right Method

- Depends on research goals, resources, and target population
- Both methods offer unique advantages and challenges

Tailoring to Research Needs

- Consider the nature of your study and participant accessibility
- Balance between quality, ‘cost’, and reach

Questions?

Lab activities

Qualtrics (Many of you will use this!)

- Log in to an account with your Goldsmiths ID!!
- 10% of you will apply for the wrong type of account and be stuck for 2 weeks

Familiarise yourself with the Ethics Application process (10mins)

Consider the steps required to bring your study to life! (the rest)

References