Survey Methods

Why surveys

- Limits of behavioural observation
  - Latent traits
- Allows gathering large amounts of information fairly easily
- Online surveys & global research
- NOT without problems
  - Based on self report
  - Biases
    - Social desirability
  - Memory errors and limits of insight

Types

- Individual differences
  - Eg personality
- Ability
  - Intelligence tests
- Attitudes
  - Measure particular beliefs toward something

Ethics

- Need to ensure that the measures being used and reliable and valid
- Equal opportunities and cultural biases

Creating a questionnaire

- Question formats
  - Open vs closed
    - Open - ask for some written detail but have no determined set of responses
      - Leads to more qualitative data but time consuming to analyse
    - Closed - short questions or statements followed by a number of options
      - Easy to analyse answers
- Writing your questions
  - Theoretical literature
    - Ideas that appear in the theoretical literature should be used as a basis
  - Experts
    - Recruit experts in the area to suggest items
  - Colleagues
    - Can help you to generate more items
- Clarity of questions
  - Don't have double barrel questions
    - Eg if I had the opportunity, resources and ability to change other students' exam grades so that mine was the best, I would do it.
      - Problem: Respondents may concentrate on opportunity, resources, and ability to different extents
      - Solution - remove ambiguity: If I had the opportunity to change other students' exam grades so that mine was the best, I would do it.
- Avoid leading questions
  - Questions that are written to lead or guide participants in a certain way
    - Eg "Do you agree with the majority of Australians that it is wrong to falsely tell a classmate the wrong exam date, so that they miss the exam?"
      - Problem: Leads the respondent in a particular direction by indicating what "a majority of Australians" think.
      - Solution - "Is it wrong to falsely tell a classmate the wrong exam date, so that they miss the exam?"
- Reverse wording
  - Participants can have a positive or negative bias - so they generally answer either agree or disagree
    - Solution by having some reverse coded statements
      - Eg "I feel bitter towards those who do better than me on my course." and "If I came second best in a piece of work, because my friend got the top mark, I would still be happy."

- Response formats
    - Dichotomous scales - yes/no, true/false
        - Forces a response
        - Not any scale
    - Frequency of behaviour
        - Eg I get upset and let me emotions out - I usually don't, I do this a little, I do this a medium amount, I do this a lot
    - Strongly agree - strongly disagree
        - Not certain option
        - Differentiate between the yes kind of and the yes definitely
    - Numerical scale
        - Likert scale
        - Can have a neutral point - if odd number
        - Eg I feel unsure of myself
            - 1 2 3 4 5 6 7
            - 1 not at all like me
            - 7 very much like me
- Clear instructions
    - Need instructions so all everyone approaches the questions the same way
        - Eg read each item carefully and think or work quickly and don't think too long
    - Or the time frame for a behaviour
        - State or trait
            - Indicate to what extent you feel this way right now, that is, at the present moment.
            - Indicate the extent you have felt this way over the past week.

Classical theory of error of measurement

- Observe score = true score + error
- Reliability
    - Internal reliability
        - Whether all your questions are addressing the same thing
        - Tests
            - Split half
                - ◊ Items are split into two halves
                - ◊ Calculate participants scores on each half - should correlate .8 or higher
            - Parallel forms
                - ◊ Create two forms of your survey
                - ◊ Do both tests - scores should correlate
                - ◊ But need to create a large number of items
            - Cronbach's Alpha
                - ◊ Mathematical equivalent to the average of all possible split half estimates
                - ◊ Need to be over .7
            - KR 20
                - ◊ Similar to cronbach - but for dichotomous
    - External
        - How repeatable your survey is
        - Test-retest reliability
            - Stability over time
            - Give participants the test at two different time
            - Results should correlate strongly
    - Inter-rater
        - Extent to which two or more raters obtain the same result when coding the same response
        - Cohen's Kappa
            - Larger numbers indicate better reliability, used when there are two raters
        - Fleiss' Kappa
            - An adaptation which works for any fixed number of raters.
        - Measures agreement not accuracy
    - Intra-rater
        - The same assessment is completed by the same rater on two or more occasions
        - These different ratings are then compared, generally by means of correlation
        - Problem: Since the same individual is completing both assessments, the rater's subsequent ratings are contaminated by knowledge of earlier ratings

    - Sources of unreliability
        - Guessing
        - Ambiguous items
        - Test length
        - Instructions
        - Temperature, illness
        - Item order effects
        - Response rate
        - Social desirability
- Validity
    - Your questionnaire is measuring what you think its measuring
    - Faith
        - Simply a belief in the validity
        - Not empirical at all
    - Face
        - It looks like a test that measures the concept it was designed to measure
        - Ask experts
    - Content
        - Extent to which a measure represents all the facets of the phenomena being measured
        - Testing the behaviours, attitudes and feelings
    - Construct
        - Clear relationship between the construct at the theoretical level and the measure that has been developed
        - Convergent validity
            - That the measure shows associations with measures that it should be related to
        - Discriminant validity
            - That the measure is NOT related to things that it should not be related to
    - Predictive
        - Assesses whether a measure can accurately predict future behaviour