RESEARCH METHODS FOR LANGUAGE STUDIES
BBI 4401
Quantitative approach
Week 2

Ramiza Darmi
Faculty of Modern Languages and Communication Universiti Putra Malaysia
September 2016
Textbook

- Chapter 2
- P. 24 The different research approaches
- P. 29 The 3 positions
- P. 30 – 35 QUAN research
- P. 95-123 QUAN data collection
- P. 197- 241 QUAN data analysis
- P. 277 - 289 Writing QUAN report
Quantitative Research

- Systematic scientific investigation of data and their relationships
Overview of QUAN research

- To develop and employ mathematical models, theories and hypotheses pertaining to natural phenomena.
- Measuring is key in quantitative research because it shows the relationship between data and observation.
QUAN research

- QUAN Data collection procedures result primarily in numerical data which is then analyzed primarily by statistical methods.
- Typical example: survey research using questionnaires analyzed by statistical software like SPSS.
QUAL research

- QUAL Data collection procedures result primarily in open-ended non-numerical data which is then analyzed primarily by non-statistical methods.

- Typical example: interview research with transcribed recordings analyzed by qualitative content analysis.
Mixed methods research

- Involves different combinations of QUAN and QUAL research either at the data collection or at the analysis levels.
- Typical example: consecutive and interrelated questionnaire and interview studies.
QUAN research

- offers structured and highly regulated way of achieving a macro-perspective of the overarching trends in the world

QUAL research

- presents a flexible and highly context-sensitive micro-perspective of everyday realities of the world
Positions regarding QUAL-QUAN distinction - Paradigm

Purists

- QUAL and QUAN methodologies are mutually exclusive

Situationalists

- Both approaches have value if applied in the appropriate research context

Pragmatists

- Some sort of integration of the two methodologies can be beneficial to corroborate, elaborate, or initiate findings from the other method
Main characteristics of QUAN research

- Using numbers
- A priori categorization
- Variables rather than cases
- Statistics and language of statistics
- Standardized procedures to assess objective reality
- Quest for generalizability and universal laws
QUAN (Empirical)

- Deductive (generalisation)
- Predictive
- Theory confirming

Involves:

- Large data
- Survey (primary data)
- Cross-section (secondary data)
Purpose of QUAN research

- To **determine** the quantity or form of some phenomenon in the form of numbers
- To **provide** precise measurement or quantification
- To **describe** characteristics of a population or a phenomenon
Examples of QUAN research method

• Surveys
• Experiments
• Secondary data
• Observation
Survey research
• Ask respondents for information using verbal or written questioning
Experimental research
• One group pretest and posttest
• Experimental group vs control group
Validity
- Ability of a scale to measure what was intended to be measured

Reliability
- Degree to which measures are free from random error; thus yield consistent results
Issues of Reliability and Validity

- Reliability = *consistency* in procedures and in reactions of participants
- Validity = *truth* - Does it measure what it intended to measure?
- When reliability and validity are achieved, data are free from systematic errors