

# **The Research Instruments**

## ■ Introduction:

**One of the most important components of a research design is the research instruments because they gather or collect data or information.**

**These research instruments or tools are ways of gathering data. Without them, data would be impossible to put in hand.**

# **QUESTIONNAIRE**

- **The most common instrument or tool of research for obtaining the data beyond the physical reach of the observer which, for ex. May be sent to human beings who are thousands of miles away or just around the corner.**

# **Two Forms of Questionnaire**

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- **Closed form / Closed-ended**
- **Open form / Open-ended**

# **Guidelines in Using the Questionnaire**

- **Clarity of language**
- **Singleness of purpose**
- **Relevant to the objective of the study**
- **Correct grammar**

# **Principles to consider in constructing Questionnaire**

- **1. define or qualify terms that could easily be misinterpret**
- **2. be careful in using descriptive adjectives and adverbs that have no agreed-upon meaning**
- **3. be careful of inadequate alternatives**
- **4. beware of double negative**

- **5. avoid the double-barreled question**
- **6. underline the word if you wish to indicate special emphasis**
- **7. when asking for rating or comparisons a point of reference is necessary**
- **8. avoid unwarranted assumptions**



- **9. phrase questions so that they are appropriate for all respondents**
- **10. design question that will give a complete answer**
- **11. provide for the systematic qualification of response**
- **12. consider the possibility of classifying the respondents yourself rather than having the respondents choose categories**

# **Advantages**

- **Facilitates data gathering**
- **Is easy to test data for reliability and validity**
- **Is less time-consuming than interview and observation**
- **Preserves the anonymity and confidentiality of the respondents' reactions and answers**

# **Disadvantages**

- **Printing and mailing are costly**
- **Response rate maybe low**
- **Respondents may provide only socially acceptable answers**
- **There is less chance to clarify ambiguous answer**
- **Respondents must be literate and with no physical handicaps**
- **Rate of retrieval can be low because retrieval itself is difficult**

# **RATING SCALE**

- **Involves qualitative description of a limited number of aspects of a thing or traits of a person**

# **Forms of Rating Scale**

- **Thurstone Technique**
- **Likert Method**
- **Semantic Differential**

# **CHECKLIST**

- **The simplest of the devices, consists of a prepared list of items. The presence or absence of the item may be indicated by inserting the appropriate word or number**
- **Use in descriptive and historical researches**

# **SOCIOMETRY**

- **Technique for describing the social relationships among individuals in a group. In an indirect way it attempts to describe attractions or repulsions between individuals by asking them to indicate whom they would choose or reject in various situations**

# **TEACHER or RESEARCH-MADE TOOLS**

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- **Very popular in research**
- **Part of the overall instruments used in research studies**
- **It combined with other standardized tests in the assessment of individuals' operations and situations**



# **OPINIONNAIRE**

- **An information form that attempts to measure the attitude or belief of an individual**
- **Also known as attitude scale**

# **PSYCHOLOGICAL TESTS**

- **An instrument designed to describe and measure a sample of certain aspects of human behavior**
- **e.i. performance test, paper and pencil test, achievement inventory, personality inventory and projective devices**

# **READY-to-USE INSTRUMENT or STANDARDIZED TEST**

- **Product of long years of study**
- **tend to be highly reliable and cover a wide range of student performance level**

# **CRITERIA for Measuring Research Instruments**

**1. Validity- measure  
what is intends to  
measure**

# **Types of Validity**

- **Content validity**
  - a. **expert judgment**
  - b. **table of specification**
- **Criterion validity**
- **Construct validity**

**2. Reliability – stability  
in maintaining  
consistent  
measurement in a test  
administered twice**

# **Methods in determining the Reliability of a Test**

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- **Test-retest method**
- **Alternate or parallel form**
- **Split-half method**
- **Rationale equivalence method**

**THANK YOU FOR  
LISTENING**