**UNIVERSITY OF M’SILA FIRST YEAR LEVEL**

**LETTERS AND LANGUAGES FACULTY MODULE: RESEARCH METHODOLOGY**

**ENGLISH LANGUAGE & LITERATURE DEPARTMENT MODULE LECTURER: FARRAH. S.**

**Lesson four: CHARACTERISTICS OF OBJECTIVES**

Clear +Complete +Specific + Identify main variables to be correlated + Identify the direction of relationship

I……*Descriptive Studies*…………I

I..*Correlational Studies (experimental and non-experimental)*…*.*I

I…………*Hypothesis testing studies*…………………………...I

**Identifying Variables**:

In a research study it is important that the concepts used should be operationalised in measurable terms so that the extent of variations in respondents’ understanding is reduced if not eliminated.

Techniques about how to operationalise concepts, and knowledge about variables, play an important role in reducing this variability.

Their knowledge, therefore is important in ‘fine tuning’ your research problem.

**For example:**

-‘Jet Airways’ is a perfect example of *quality* cabin service.

- Food in this restaurant is *excellent.*

*-* The middle class in India is getting more *prosperous.*

*When people express these feelings or preferences, they do so on the basis of certain criteria in their minds. Their judgement is based upon indicators that lead them to conclude and express that opinion.*

These are *judgements* that require a sound basis on which to proclaim. This warrants the use of a measuring mechanism and it is in the process of measurement that knowledge about *variables* plays an important role.

**The Definition of a Variable**:

An image, perception or concept that can be measured – *hence capable of taking on different values*- is called a *variable.*

**The Difference Between a Concept and a Variable**:

Concepts are mental images or perceptions and therefore their meaning varies markedly from individual to individual.

A concept cannot be measured whereas a variable can be subjected to measurement by crude/refined or subjective/objective units of measurement.

It is therefore important for the concept to be converted into variables.

**Concept Variable**

-Subjective impression - Measurable though the degree of precision -No uniformity as to its Understanding varies from scale to scale and variable to variable.

among Different people

-As such cannot be measured.

**e.g. e.g.**

• Excellent - gender (male/female)

• High achiever -age (**x** years **y** months)

• Rich -weight (--kg)

• Satisfaction - height (-- cms)

• Domestic violence - religion (Catholic, Hindu)

 -Income (Rs ---per year)

**Concepts, *Indicators* and Variables**:

If you are using a concept in your study, you need to consider its operationalisation- that is, how it will be measured.

For this, you need to identify *indicators*- *a set of criteria reflective of the concept* which can then be converted into variables.

The choice of indicators for a concept might vary with researchers, but those selected must have a logical link with the concept.

**Types of Measurement Scales:**

*Measurement is central to any enquiry.*

The greater the refinement in the unit of measurement of a variable, the greater the confidence, *other things being equal*, one can place in the findings.

S.S. Stevens has classified the different types of into four categories:

• Nominal or classificatory scale

• Ordinal or ranking scale

• Interval scale

• Ratio scale

**The Nominal or Classificatory Scale**:

A nominal scale enables the classification of individuals, objects or responses into subgroups based on a common/shared property or characteristic.

A variable measured on a nominal scale may have one, two or more subcategories depending upon the extent of variation.

For example, ’*water*’ or ‘*tree*’ have only one subgroup, whereas the variable “*gender*” can be classified into two sub-categories: *male and female.* ‘*Hotels*’ can be classified into ---- sub-categories.

The sequence in which subgroups are listed makes no difference as there is no relationship among subgroups.

**The Ordinal or Ranking Scale**:

Besides categorizing individuals, objects, responses or a property into subgroups on the basis of common characteristic, it ranks the subgroups in a certain order.

*They are arranged either in ascending or descending order according to the extent a subcategory reflects the magnitude of variation in the variable.*

*For example*, ‘income’ can be measured either quantitatively (in rupees and paise) or qualitatively using subcategories ‘above average’, ‘average’ and ‘below average’. *The* *‘distance’ between these subcategories are not equal as there is no quantitative unit of* *measurement.*

‘Socioeconomic status’ and ‘attitude’ are other variables that can be measured on ordinal scale.

**The interval scale**:

An interval scale has all the characteristics of an ordinal scale. In addition, it uses a unit of measurement with an arbitrary starting and terminating points.

*For example*,

Celsius scale: 0\*C to 100\*C

Fahrenheit scale: 32\*F to 212\*F

Attitudinal scales: 10-20

 21-30

 31-40 etc

**The Ratio Scale**:

A ratio scale has all the properties of nominal, ordinal and interval scales plus its own property:*the zero point of a ratio scale is fixed, which means it has a fixed starting* *point.* Since the difference between intervals is always measured from a zero point, this scale can be used for mathematical operations.

The measurement of variables like income, age, height and weight are examples of this scale. A person who is 40 year old is *twice* as old as one who is 20 year old.

**Constructing Hypotheses:**

As a researcher you *do not know* about a phenomenon, but you *do have a hunch* to form the basis of certain *assumption or guesses.* You test these by collecting information that will enable you to conclude if your hunch was right.

The verification process can have one of the three outcomes. Your hunch may prove to be:

1. right;

2. partially right; or

3. wrong.

Without this process of verification, you cannot conclude anything about the validity of your assumption.

Hence, *a hypotheses is a hunch, assumption, suspicion, assertion or an idea about a phenomenon, relationship or situation, the reality or truth of which you do not know.*

A researcher calls these assumptions/ hunches hypotheses and they become the basis of an enquiry.

In most studies the hypotheses will be based upon your own or someone else’s observation.

Hypotheses bring clarity, specificity and focus to a research problem, but are *not essential* for a study*.*

You can conduct a valid investigation without constructing formal hypotheses.

**The Functions of Hypotheses**:

• The formulation of hypothesis provides a study with focus. It tells you what specific aspects of a research problem to investigate.

• A hypothesis tells you what data to collect and what not to collect, thereby providing focus to the study.

• As it provides a focus, the construction of a hypothesis enhances objectivity in a study.

• A hypothesis may enable you to add to the formulation of a theory. It enables you to specifically conclude what is true or what is false.

**Step 4. PREPARING THE RESEARCH DESIGN**

*Research design is the conceptual structure within which research would be conducted.*

The function of research design is to provide for the collection of relevant information with minimal expenditure of effort, time and money.

The preparation of research design, appropriate for a particular research problem, involves the consideration of the following:

1. Objectives of the research study.

2. Method of Data Collection to be adopted

3. Source of information—Sample Design

4. Tool for Data collection

5. Data Analysis-- qualitative and quantitative

1. **Objectives of the Research Study:**

Objectives identified to answer the research questions have to be listed making sure that they are:

a) Numbered, and

b) Statement begins with an action verb.

2. **Methods of Data Collection:** There are two types of data

Primary Data— collected for the first time

Secondary Data—those which have already been collected and analysed by someone else.