#### 'Importance & Formulation of Hypothesis in Research Work'

(UGC Recognized Course Work in Research Methodology Organized by Yeshwant Mahavidyalaya, Wardha)

#### A Guest Lecture by Dr. Uttam Baburao Parekar (Associate Professor, Yeshwant Mahavidyalaya, Wardha (M.S.)

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**Introduction of the Guest Speaker** 

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#### Importance & Formulation of Hypothesis 1- Identifying Research Problem/Area

Almack: 'A question proposed for solution', 'A matter taken for examination' ... 'A doubtful case' ... Problem necessitates research ... Problem is a situation which presents complex, puzzled, and discomfited state of knowledge

#### **I- Sources for finding problems**

- i- Posing questions to experts
- ii- Inculcating lively imagination
- iii- Participation in seminars, workshops
- iv- Consulting theses/dissertations, books/journals
- **II- Formulation of Problem** 
  - i- Locating unexplored area of the subject
  - ii- Situation Problematized
  - ii- What is the purpose of study? How much is already known? What is to be ascertained? How is it to be measured? Scheme for data collection

### Formulation of Hypothesis 2- Formulation of Research Questions

- Research questions specify nature and scope of the project. Enquiry into three aspects of topic with:
  - I- What: to Seek description
- II- Why: to seek explanation and understanding
- III- How: to seek interventions to bring about change

# **3- Setting Research Objectives**

Research objectives must be clear and concrete They must be set on problem area Objectives set must contribute to certain conclusion Dialectical nature of objectives

## **Formulation of Hypothesis**

4- Research Hypothesis Etymological Origin of the Term: 'Hypothesis Greek: 'hupothesis' > 'Hypothesis' (Mod. Eng) Hypo = under and Thesis = A Proposition, Assumption

**Hypothesis:** Supposition, Assumption, Proposition, Predictive statement, Well thought-speculation which has not been tested, and not yet proved or disproved its validity

Kothari calls it: Principle instrument in research



# **Formulation of Hypothesis** Types of Hypothesis

#### **1- Working Hypothesis:**

Initial tentative assumption with which data is collected, literature is reviewed, and final research thesis

#### **2- Evaluating Hypothesis:**

It is also called 'Falsifiable Hypothesis' for it is framed in wrongly

# **3- Scientific Hypothesis:** It is based on empirical data.

# **Concept of A Good Hypothesis**

Clear hypothesis is purpose and direction oriented.

It keeps researcher from rambling.

It is a membrane that holds the research together.



## **Format of Hypothesis**

#### **1- Conditional Statement**

"If employees are healthier, they will take sick leave less frequently" (Less clear for it constitutes evidence for or against latter proposition)

#### **2- Non-Conditional Statement**

"Employees who are healthier take sick leave less frequently" (Clear hypothesis)

#### **3- Directional Statement**

"The greater the stress experienced by employees in job, the lower their job-satisfaction" (Clear hypothesis)

#### **Table Illustrating Formulation of Hypothesis**

Box 3.1: Distinction between Research Problem, Research Question, Research Objective and Research Hypothesis			
Research Problem/Area	Research Questions	Research Objectives	Hypothesis
Teaching Poetry to Engineering Students	Do engineers learn anything from poetry? How poetry can be taught to engineers? What aspects of the poems must be highlighted? Whose poems best suit to the engineering students? What teaching techniques must be adopted? So on and so forth.	To Make engineering students be in touch with Arts so that they can bring aesthetic value to their profession	Engineers learn style through poetry. By reading poetry engineers learn how to appreciate beauty and carry this to their profession. Engineers will connect their profession to the arts and humani- ties etc.