

# **Presentation On**



## **Developing The Research Problem**

**Presented by**

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# RESEARCH PROBLEM

- A problem can be described as “A matter difficult for settlement or solution.”
- But in research a problem should be based upon:
  - A gape of knowledge.
  - Situation which has defined solution.
  - Picture which is hazy.
  - tangle which is yet to be resolved.
- As the professional field (physical education & sports) offers a wide spectrum of problems from such areas as health, recreation, management, competition, motor performance etc.

# IDENTIFYING THE RESEARCH PROBLEM

The whole process of indentifying the research problem is based on following these two approaches:

- a) Locating the research problem. (how you locate your topic).
- a) Criteria in selecting the research problem. (things to be kept in mind while locating the topic/problem.)

# LOCATING THE RESEARCH PROBLEM

**The following suggestions for locating the research problem are as follows:**

- a) Systematic record of unsolved problem.
- b) Analysing literature in an area or subject field.
- c) Analyze thoroughly an area of special interest
- d) consider corroboration of former studies.
- e) Examine controversial issues.
- f) Become informed of research going on at the university.
- g) Consult with faculty member.

# LOCATING THE RESEARCH PROBLEM (cont.)

## **(a) Systematic Record of Unsolved Problem:**

- Professional reading may point out several unsolved problem that could serve as research project.
- These should be notes systematically with the sources along with notes of explanation and perhaps suggestions for solution.
- Add any circumstances that make a particular problem unique.
- Class discussion often yield ideas for unsolved problems.
- The attuned students should make notes of any such propositions and immediately prepare brief notes of explanation.

# LOCATING THE RESEARCH PROBLEM (cont.)

## **(b) Analysing literature in an area or subject field:**

- Most important source of research problem is to carefully analyze the literature. So it become difficult for the beginning students to master .
- For analyzing the literature, Note the distribution of research completed in the area. Do all feeds of the problem seems to be well covered? What gap exist? Where is the greatest interest.
- Discover any trends that may become evidence.
- Examine critiques of the given field.
- Analyze statement of needed investigations.
- If the review is comprehensive, this may be an excellent lead.

# LOCATING THE RESEARCH PROBLEM (cont.)

## **(c) Analyze thoroughly an area of special interest:**

- It is recommended that the researcher select an area of his/her special interest. And peruse it diligently to determine the items that requires further study.
- Next, it is necessary to review completed research to discover gap in knowledge. This, in all likelihood will cause the list of problems to grow and will require that a priority be established.
- After successfully accomplishing the review of completed researches the last step is to become thoroughly familiar with the research concerning the topic.

# LOCATING THE RESEARCH PROBLEM (cont.)

## (d) Consider Corroboration of Former Studies:

- Every institutes/ university insist the scholar that their studies be original.
- There may be instances when corroboration is justified, if not definitely desirable.
- This suggestions of corroboration is not intended to advocate irresponsibility repeating study by others; the student should have sound reason for doing so in each instance.
- **For example:** In the first , Kraus and Hirschland reported in his study that the unites state children had a high incident to failure on the kraus-Weber test of minimum muscular fitness, especially as compared to European children. There sample was from “eastern seaboard” so comparative normative survey were conducted by other in various area of unites state and in other countries.

# LOCATING THE RESEARCH PROBLEM (cont.)

## (e) Examine Controversial Issues:

- Controversy may exist concerning various practices in physical education and sports which may provide new problems for research.
- Such issues like desirability competitive sports for young boys and girls, new trends in physical education, the role of exercise with intensity variation in the reduction of fat and cholesterol in the arteries, contribution of physical education and sports to the society, addressing body image issues etc.
- It should be recognized that solving the major complex issues of the day is a multidimensional problem and therefore, the researcher need to determine the specific facet to be researched.

# LOCATING THE RESEARCH PROBLEM (cont.)

## **(f) Become Informed of Research Going on at the University:**

- A logical suggestion for the student in seeking a research topic is to become acquainted with research underway in his or her department at the university.
- The researcher can get the benefit from the opportunity to observe a large and integrated research study and to appreciate the depth of knowledge that is being explored.
- the scholar's search of the pertinent literature and other processes connected with thesis or dissertation provide a unique background from which his or her own future research activity can grow.

# LOCATING THE RESEARCH PROBLEM (cont.)

## **(g) Consult With Faculty Member:**

- Consultations with the scholar's adviser, course instructors, major professors or other faculty members may be helpful in locating a effective research problem.
- Prior to consultation with a professor or other faculty member, the student should become acquainted with his or her research interest and should acquire a background in the field through appropriate reading.
- The important function of the research adviser is to help the scholar clarify his or her thinking, achieve sense of focus and develop a manageable problem from one that may be vague or too complex.

# **CRITERIA OF SELECTING THE RESEARCH PROBLEM**

**The criteria of selecting the research problem are as follows:**

- a) Is the scholar is interested in research problem?
- b) Is it possible to obtain research data appropriate to the solution of the problem?
- c) Are techniques available for the solution of the problem?
- d) Is the research feasible?
- e) Do the scholar have adequate training and experience to interpret results?
- f) Will the problem makes a significant contribution?

# RESEARCH HYPOTHESIS

- An hypothesis is a supposed statement, tentative explanation tentative organization of facts in a meaningful way, to be tested.
- Made by two separate Greek words:
- **Hypothesis**
  - **Hypo** → **Under**
  - **Thesis** → **Refer to Place**

**Anything Under Consideration**
- It is a preposition or assumption or intelligent guess for research work, to be tested.
- It gives proper guidance to the research activity.

# RESEARCH HYPOTHESIS (cont.)

## Definitions:

- Hypothesis is a proposition which is put to a test to determine its validity. -( By Goode and Hall)
- Hypothesis is the tentative assumption, the validity of which remains to be tested. -(By Lund Berg)
- It is a provisional guess which seems to explain the situation under observation. -(By James E. Greighton)

# CHARACTERISTICS OF GOOD HYPOTHESIS

A good hypothesis possesses the following qualities:

- **Power of prediction:** To predict the future.
- **Closest to observable things:** Should not believe in air castle. It should be based on observations.
- **Simplicity:** Should be simple and have no complexity.
- **Clarity:** It should be conceptually clear. The terminology used while formulating must be clear and accepted to every one.
- **Testability:** A good hypothesis should be tested empirically. It should be stated and formulated after verification and deep observation.

# CHARACTERISTICS OF GOOD HYPOTHESIS (cont.)

- **Relevant to problem:** A hypothesis is guidance for the for the identical and solution of the problem, so it must be according to the problem.
- **Fruitful for new discoveries:** It must be able to provide new suggestions and way of knowledge.
- **Consistency and harmony:** Internal harmony and consistency is a major characteristics of a good hypothesis. It should be out of contradiction and conflicts.
- **Provide direction to the research:** Hypothesis act as a guide master in a research. It gives new knowledge and direction to the research.

# CHARACTERISTICS OF GOOD HYPOTHESIS (cont.)

- **Link between theory and investigation:** theory is the source of hypothesis which leads to its formulation. Hypothesis leads to scientific investigator so, it should act as a bridge between theory and investigator.
- **Provide answer for the questions:** A hypothesis highlights the causes of problematic situation. Further solution is also given by the hypothesis which provides answer to a question.
- **Proper conclusion:** A proper formulated hypothesis may lead to a good reasonable, utilized and proper conclusion.

# FORMULATION OF HYPOTHESIS

The following sources for formulating the hypothesis are:

- a) **Personal experience:** on the basis of personal experience, a researcher uses his mind and suggests some points for the eradication of the social problem through developing a good hypothesis. Greater the personal experience leads to higher hypothesis formulation.
  
- a) **Imagination and thinking:** creative thinking and imagination of the researcher some times help in formulating the good hypothesis. Personal ideas and the thinking ability of the researcher leads to more relevant hypothesis formulation as well as the control over the problem.

# FORMULATION OF HYPOTHESIS (cont.)

- c) **Observation:** one of the best source of formulating hypothesis is keen observation of a researcher. In consideration and undertaking a research problem, observation is necessary. The collection of the previous facts and current facts related to the problem lead to the formulation of a good hypothesis.
- d) **Scientific theory:** theory is capable in explaining all the facts relating to the problem. Scientific theory is a fertile source of hypothesis formulation. The theory which is used by a researcher may satisfied the needs of making the hypothesis because theory explain the known facts.

# FORMULATION OF HYPOTHESIS (cont.)

- e) **Previous study:** if the researcher used previous knowledge about the phenomenon for the particular place, then the another researcher followed his techniques and formulate his own hypothesis.
- f) **Culture:** culture is the accumulation of ways of behaving and adoption in a particular place and time. While formulating a hypothesis for the problem, culture should be studied. If suppose we want to study trends towards female education in a particular area so for this purpose we will study traditions, family system, norms, values, region and education system of that area.

# TYPES OF HYPOTHESIS

The different types of hypothesis are:

- 1) **Simple hypothesis**
- 2) **Complex hypothesis**
- 3) **Null hypothesis**
- 4) **Alternative hypothesis**
- 5) **Logical hypothesis**
- 6) **Statistical hypothesis**

# TYPES OF HYPOTHESIS (cont.)

## 1) Simple hypothesis:

- Researcher tries to exist the relationship between two variables.
- Relationship of independent variable (cause) to the dependant variable (effect).
- Example: - Smoking leads to cancer.
  - The higher rate of unemployment leads to crime

# TYPES OF HYPOTHESIS (cont.)

## 2) Complex hypothesis:

- Complex hypothesis is that one in which as relationship exists among the variables (more than two)
- Dependant and independent variables are two or more than two.

**Example:** - Smoking and other drugs leads to cancer, tension, and other physio-psychological disorder.

- She higher rate of unemployment, poverty, illiteracy leads to crimes, robbery, rape, killings etc.

# TYPES OF HYPOTHESIS (cont.)

## 4) Null hypothesis:

- Null hypothesis is contrary to the positive statement of the working hypothesis.
- Null hypothesis states that there is no any relationship between dependant and independent variable.
- Algebraically represent as  $H_0$ .
- Always use to test the research hypothesis.

**Example:-** There will be no any significant relationship among the variables.

# TYPES OF HYPOTHESIS (cont.)

## 5) **Alternative hypothesis:**

- Also known as the research hypothesis.
- which is stated by the researcher for establishing the relationship among the variables in the beginning of the research.
- Firstly many hypotheses are made by the researcher and then select the most appropriate and efficient hypothesis which is workable.
- Algebraically represented by  $H_1$ .

**Example:-** It is hypothesised that there will be significant relationship among the variables.

# TYPES OF HYPOTHESIS (cont.)

## 6) Logical hypothesis:

- These hypothesis is verified logically.
- J. S. Mill has given four cannons of these hypothesis i.e. Agreement, Disagreement, Difference and residue.

## 7) Statistical hypothesis:

- which is verified statistically.
- The statement would be logical or illogical but if statistics varies it, that will be statistical hypothesis.

# DELIMITATIONS

- It refers to the boundaries to the study, which is to be predetermined by the researcher.
- Also exhibits the scope of the study.
- Delimitation includes:
  - a) The number and nature of the subjects.
  - b) The number and kinds of variables.
- In short, delimitation give the idea about the effects and details of the study. It avoid the vagueness which may be created due to the title of the research work.
- It also refers to the nature of work, keeping the title to appropriate size.
- Less important things to be avoided from the title and must be mentioned at delimitations.

# DELIMITATIONS (cont.)

- There are four major aspects of the study, which require demarcation at the beginning.
  - 1) **Geographical setting:** It may be confined to a district, college, state, country, university etc.
  - 2) **Sample characteristics:** Age, gender, vocation, height, weight, socio-economic status etc.
  - 3) **Nature and number of variables:** Physical, physiological, psychological, sociological, anthropometrical variable etc.
  - 4) The way that dependent variables are measured.

# LIMITATIONS

- It refers also refers as delimitations which are not under the control of researcher during the study.
- All those factors which can directly or indirectly influence the main effect of the study comes under the limitations.
- In behavioural research such as physical education and sports, a large number of situations and factors are not within one's control.
- **For example:**
  - (a) Time and session of the experiment (effect of).
  - (b) Mental and physical state of the subjects(during testing).
  - (c) Types and condition of sports equipments or measuring equipments (when using these equipments).
  - (d) Daily routine of the subjects (before testing).
  - (e) Diet, rest, exercise and social stress (effect of).
  - (f) Review of literature (impact of previous study/outcome)

# LIMITATIONS (cont.)

- Shrinking from hard work and sincere effort under the pretence of limitation of no wisdom. Too many limitations would less credible study.
- All the limitations must be mentioned separately in the thesis.
- But stating the limitations does not save the investigator from responsibility and the truthiness or validity of work remains in question.
- So in planning the research, such shortcomings (limitations) should be eliminated as far as possible and in case of major problems, the study should not continue.
- In addition, careful planning and painstaking methodology increases the validity of the results, thus greatly reducing possible deficiencies in the study.

# SIGNIFICANCE OF THE STUDY

- Most unavoidable question that a scholar face at the time of proposal meeting as well as final oral viva examination, deals with the work/significance of the study.
- Therefore, every researchers mention the significance of the study separately in their thesis.
- This section discuss should discuss the importance of the proposed research, its relevance and contribution to the advancement of knowledge to the society.
- The worth of research study is judged by whether it is applied or basic research.
- Significance of basis research focuses on the extent of the study to contributes in the formulation and validation of some theory.
- Whereas, the significance of the applied research depends upon its contribution to the solution of some immediate problem.

# SIGNIFICANCE OF THE STUDY (cont.)

The significance section should focus on:

- 1) Contradictory findings of previous research.
- 2) Gap the knowledge in particular areas/ controversies.
- 3) Contribution that the study might make to users.
- 4) Difficulties in measuring aspects of the phenomenon.
- 5) Verifying exiting theories.
- 6) Practical application.

**Note :** Both practical and theoretical reason must be expressed, but the emphasis will change according to the study.

Thank  
you

