

DEPARTMENT OF PHYSICAL EDUCATION

Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G.)

Model Answer (Paper Code: -AV-8634)

Subject: - Research Process MPCC-101(Paper-First) Class: - M.P. Ed. First Semester 2015-2016

Section-A

1. Basic research is directed towards findings, the basic truth or knowledge behind the things. It is not concern with application of this knowledge but is only interested to give pool of knowledge.
2. A hypothesis of no difference.
3. Lack of primary sources.
4. It is directed towards findings, the basic truth or knowledge behind the things. It is not concern with application of this knowledge but is only interested to give pool of knowledge.
5. This effect (Brown 1954) refers to the fact that participants performances change when attention is paid to them.
6. A characteristic which is changeable.
7. Convenience sampling, Judgment sampling, Quota sampling, Snowball sampling,
8. Sampling error is any type of bias that results from mistakes in either the selection process for prospective sampling units or in determining the sample size.
9. After selecting a problem the research scholar has to submit a proposal to the university to get the problem approved. The proposal should be good enough to satisfy the committee, that the problem is important, feasible & worth investigating. The research proposal basically contain definition, scope, significance, a brief review of the related literature & the methodology which will be used for the study. It is always in future tense
10. Introduction, Review of Related Literature, Methodology, Analysis of data, results & discussion, Summary, Conclusions & Recommendations.

SECTION -B

11. Hypothesis is a combination of two words i.e. **Hypo** (Tentative which is subject to verification meaning changing can be takes place)+ **Thesis** (means statement about solution of problem)

According to Coffey:-“A hypothesis is an attempt at explanation, a provisional statement / supposition made in order to explain scientifically”.

E.Greighton,“It is a supposition or provisional guess which seems to explain in situation under observation”.

- **FORMULATION OF HYPOTHESIS:-**The formulation of hypothesis is not merely accidents or the collection of factual information. It is based partially on knowledge facts& explanations & partially conceptual. There are no practical for formulating hypothesis & reaching the consequences from one has to give his vision in presenting his hypothesis while defending his research work. For hypothesis researcher should give justification. It is a tentative statement.
- The following steps may be helpful in the formulation of hypothesis:-
- Rich background of knowledge.
- Deductive reasoning from theory.
- Relate with previously known facts/ Researches.
- Clarity of tools & knowledge of tools.

IMPORTANCE OF HYPOTHESIS:-

- Hypothesis acts as investigators eyes by guiding the investigator in getting the answer of tentatively adopted generalization.

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- Without hypothesis a research is unfocus & remains like a random search. It serve as an important link between the theory & investigation. Theory –past experience, investigation- The work you are doing.
- A well thought hypothesis make the goals clear & help in selecting samples & procedure to meet these goals.
- Hypothesis link the related facts & information's.
- According to P.V. Young, “The use of hypothesis prevents a blind search & unnecessary gathering of data”.
- It serves as a guiding way or path for the research work.

OR

(i) **CRITERIA OF SELECTING A RESEARCH PROBLEM:-** Criteria means base. The base on which we create/ select the problem. There are three main criteria which are as follows:-

PERSONAL CRITERIA:-

- Personal interest of the investigator.
- The research work should be within the capabilities of the investigator.
- The problems should be within the resources of the investigator.
- The researcher should gain something from the research work (gain in terms of knowledge, experience, identity, motivation & appreciation etc.)
- The researcher must have adequate training & experience for the his research work.

SOCIAL CRITERIA:-

- The research work should have value for the society.
- It must stimulate further research and motivate people.
- The research should be based on the needs of the hour/ time.
- The research work should be original & uniue.
- The research should reveal truth within any bias (particularly must not be there).

III. RESEARCH CRITERIA:-

- The scope of research should be definite & specific.
- The researcher should be very clear with his process & procedures of his research work.
- The work should contribute to the field of knowledge.
- It should have theoretical values.
- It must also have practical values.

(ii) “Limitations are the those conditions which are beyond the control of researcher & may place restrictions on the conclusions of the study & their application to other situation”- John W. BEST & JAMES V. KAHN.

- “Limitations are usually those items which influence the study in some substantive way i.e. any drawback to the study that should be known to bee the researcher at the start of his research work.” – DAVID H. CLARK

(iii) Delimitations mean forming a boundary when an individual form a boundary & don't want to go beyond that. In this the researchers have choice to select according to the requirement of the problem. Delimitations are also known as the scope of the study or the boundaries of the study.

- Delimitations are defined as the term to identify boundaries. In this instance, the delimitations is social research refer to the various boundaries used in the study such as the participants, apparatus or instruments used, and the geographical placement.

UNIT-II

12.The validity of historical data can not be taken for granted by the historians. The data must be carefully analysed to differentiate between the true data & misleading or irrelevant data. The true & usable data in historical research are known as historical evidence. These evidence are the body of validated facts & information's which can be accepted as trustworthy as a proper basis for testing & interpreting a hypotheses. The data must be evaluated properly by applying two types of criticism:-

Internal criticism-It is concerned with the meaning & accuracy of the documents. Internal criticism evaluates the trustworthiness of its contents through the following questions:-

- Is the meaning of the words the same?
- Is the author writing seriously?
- Is the author expressing his/her real beliefs?
- How soon after the events was the document written?
- Was the author biased in any way?
- Are the written sources evaluated with an understanding of time & conditions under which they were produced.

External Criticism:- It establishes the authenticity of the genuiness of the sources i.e. whether a given document is really a source of evidence about the past through carbon dating. It helps to determine whether a given source is genuine & admissible as evidence.e.g. Signature, handwriting, language.

OR

Questionnaire	Interview technique
<ul style="list-style-type: none"> • It deals with significant topics. • Only those information's are gathered through questionnaire which are not available through other sources. • It should be as short as possible. • It should be attractive in nature. • The directions for the reply should be clear and complete. • The degree of difficulty should be from simple to complex. • The evaluation should be easy. • The tabulation should be easy. 	<ul style="list-style-type: none"> • On the spot follow up questions may be asked. • There is a scope for clarification & interpretations of the questions & so the required responses may be obtained. • It sometimes permit follow up leads which can help in getting additional information • An experienced investigator may get an idea about the accuracy of reply. Sometimes the accuracy of reply may be affected by self interest. • Tabulation /Evaluation are hard. • The investigator develops repo with respondents which will help in getting better responses. • The responses should be classified as in case of a questionnaire. The investigator should not strict as much as possible during the interview. Recording of interview may also be helpful after getting the consent of subject.

UNIT-III

13. The experimental design is the blue print of procedures which enable the researcher to test hypothesis by reaching valid conclusions about relationship between dependent and independent variables.

The selection of the design is based on the purpose of experiment, the type of variables & the conditions or limiting factors.

Pre- Experimental Designs:- One of the three types of research design that control very few of the sources of invalidity and that do not have random assignments of participants to groups. They are as follows:-

- a. One shot design
- b. One group Pretest-posttest design
- c. Static group comparison design

One-shot studies

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One-group pretest-posttest (Single group design)

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Static group comparison (one shot w/2 groups)

T O₁

----- Statistical analysis? It

O₂

OR

Internal Validity (Campbell & Stenley 1963, Rosenthal added 9th) – the validity of findings with the research study; the technical soundness of a study, particularly concerned with the control of extraneous influences that might effect the outcome.

- History-during
- Maturation
- Testing
- Instrumentation
- Statistical regression
- Selection bias
- Experimental mortality
- Selection-maturation interaction
- Expectancy

Controlling Threats to Internal Validity:-

- Placebos
- Blind setups
- Double-blind setups
- Randomization (controls H,M,S,S,S,)

UNIT-IV

14. **POPULATION:-** It is the collection of units having similar properties under study. Population may also be defined as families, schools, colleges and universities etc.

SAMPLE:- A small portion of population units is a sample or in other words sample is the subset of a population. The concept of representativeness should be induced in the sample for drawing valid conclusions about population parameters.

Advantages of sample over population study:-

1. Reduction of cost:- (Money or man hours)
2. Reduction of Time.
3. Better control over field investigator.
4. Subjects can be properly motivated.
5. Reduction of non response error.
6. Administrative Conveniences:-
 - i. control time & experiment
 - ii. Efficiency and accuracy of data
 - iii. Reduce errors in estimating the population characteristics.

OR

- (i) Sampling involves selecting a relatively small number of elements (sample) from a larger defined group (population) and expecting the information gathered from the small group will enable judgments about the larger group.

Sampling Techniques

Nonprobability: Sampling methods that do not let us know in advance the likelihood of selecting for the sample each element or case from a population. E.g. Convenience sampling, Judgment sampling, Quota sampling, Snowball sampling etc.

Probability: Sampling methods that allow us to know in advance how likely it is that any element of a population will be selected for the sample .Knowing the chance of selection allows one to control sampling bias (under or overrepresentation of a population characteristic in a sample). Simple Random Sampling, Systematic Random Sampling, Stratified Random Sampling, Cluster Sampling, Sequential Sampling

- (ii) **Sampling Error:** - . Any type of bias that results from mistakes in either the selection process for prospective sampling units or in determining the sample size.

Non Sampling Error:- bias that occurs in a research study regardless of whether a sample or census is used; e.g., bias caused by measurement errors, response errors, coding errors, etc.

UNIT-V

15. Purpose:- The research scholar has to present the details for the work as done by him, in lines with the proposal which he gave. In the research proposal he created the situations under which he got the permission to go through his work. In the report he give first 3 chapters in much detailed form along with the methodology used by him, the discussion & the findings in the 4th chapter followed by the summary, conclusions & recommendations in the 5th chapter.

Characteristics of Good Research Report:-

1. It should be written in past tense (Third person).
2. It should have the latest reference & arranged in such a way the references slowly move on year wise coming closer to the year of research.
3. The reference should be authenticated through primary sources.
4. As far as the work should be supported by critical literature.
5. The headlines of the topic as well as the initial title of the chapter should be written as per the format.

OR

Methods of Abstracts Writing:- Generally follow these procedures:-

1. Write a short introduction to set up the problem statement
2. State the problem
3. Describe the methodology briefly, including
 - a. Participants
 - b. Instrumentation
 - c. Procedures
 - d. Design and analysis
4. Summarize the results
5. Explain why the results are important