Ph.D. (Course Work) Paper :-

Research Methodology

SAMPLE QUESTION

1. What is meant by 'Research' ? Explain the various definition and characteristics of Research.

Anwers :- Research is a process through which an individual or the researcher helps to search the definite or useful information from the number of respondents to evaluate or solve the problem-related questions. In fact, research is an art of scientific investigation or technique.

In other words, some people say that research is a systematized effort to gain knowledge and it is a process of collecting, evaluating, and interpreting information to answer questions.

Characteristics of Research:

The characteristics of research include various points such as:-

1. Research should be controlled-

It should be controlled because of the relation between two or more variables are affected by each other (whether it is internal or external). If the research is not controllable, then it will not be able to design a particular research report.

2. Research should be rigorous-

It should be rigorous because it helps to follow the procedures to find out the answers related questions which are relevant and appropriate in nature. The research information consists of two types of sciences such as physical and social sciences. These two sciences are also varied from each other.

3. Research should be systematic-

Research should be systematic because if a researcher wants to do a perfect research design or process then it will have to evaluate or obtained the necessary information from the market in a systematic manner. It takes various steps to do a perfect or systematic research process and all the steps of procedures are interlinked to each other.

4. Research should be valid-

It means the information which is collected by the researcher can be the correct and verifiable by yourself (i.e, researcher himself). If our collected information is fair or valid, then our research will also be ethical in nature.

5. Research should be empirical-

This means that any conclusion drawn is totally based upon ethical or hard evidence gathered information collected from observations and real-life experiences.

6. The foundation of knowledge-

Research is the foundation of knowledge for the purpose of knowledge and an important source for providing guidelines or norms for solving different social, business, or governmental problems. It is a variety of formal training which enables us to understand the new developments in one's field in an efficient way.

OR

On which points, Research Proposals are prepared ? Make a Research Proposal on those points.

Answers: A research proposal typically has a very consistent structure, and you may wish to find example papers before writing your own. First, the proposal begins with a broad introduction to the topic of interest, where key terms are defined and main findings are explained theoretically. Next, the student should use this existing body of evidence to form and explain a novel hypothesis related to the topic. It should be clear from the text of the paper why the student is interested in this question, or why exploration of this hypothesis is necessary.

Next comes a chapter where the student explains how he or she will go about collecting data to test this hypothesis; this section should be very clear about the exact measures and methods that will be utilized. Finally, the student should explain how they intend to analyze or make sense of their data once they have collected it, and should explain what the broader implications of their research might be. Once these components have been written, the proposal is ready to be submitted to the student's committee.

When drafting your research proposal, you should keep in mind several key points. These points are: the theory, the hypothesis, and the method of inquiry. The purpose of a research proposal, after all, is for the student to make a case for their research project. Throughout your paper, you should try to convince your readers that the subject is interesting and important for many people, and there is a gap in the current state of knowledge in the subject. Further, your paper should advocate the point that your research will help to fill this gap, and bring greater understanding to the scientific community.

2. Explain any two of the following along with their importance in Research Methodology.

(i) Topic Selection

The research problem undertaken for the study must be carefully selected. It should not be borrowed. It should spring from the researcher's mind like a plant springing from its own seed. A research problem rightly and rationally selected solves half the problems. The right selection of the topic has unlimited advantages and it boosts the morale of the researcher. A right selection of a research problem helps the researcher to proceed with his work methodically and step by step. This will help the researcher to finish the project within the stipulated time and that too with a minimum cost. The right selection of the topic enables the researcher to get a clear picture of the problem at every stage. It helps him to avoid as far as possible unnecessary modifications, omissions, and additions. The range of potential topics for social research is as broad as the range of social behavior itself. Clarity of thinking at the selection level minimizes confusion at every later stage and ultimately results in the success of the project.

(ii) Hypothesis

Hypothesis is a logical prediction of certain occurrences without the support of empirical confirmation or evidence.In scientific terms, it is a tentative theory or testable statement about the relationship between two or more variables i.e. independent and dependent variable. Importance is:

- It ensures the entire research methodologies are scientific and valid.
- It helps to assume the probability of research failure and progress.
- It helps to provide link to the underlying theory and specific research question.
- It helps in data analysis and measure the validity and reliability of the research.
- It provides a basis or evidence to prove the validity of the research.
- It helps to describe research study in concrete terms rather than theoretical terms.

(iii) Primary and Secondary data

Primary data is the data that is gathered with specific purpose in mind. It means the data is collected by someone from their original sources called primary data.
Primary data is considered as very important in any statistical survey or any other.
Validity: You can't ignore the significance of primary data in this era. The validity of this data depends on the efforts kept while doing research that makes it trustworthy and scientific.
Authenticity: It depends on the actuality of the research. It will not provide you proper results if researchers do some malpractices by adding some misleading information.
Reliability: It specifies the certainty of the research made; for instance, if researchers conclude a certain parameter that must be based on the conducting experiment on the real-time scenario, it should not be based on assumptions.

Secondary data is the data collected by others with a different purpose in mind and which is readily available from other individuals.
Compared to primary data, secondary data is less critical, but it has its significance.
There are certain circumstances where you can't get any means to collect the primary data; that time, it will be beneficial to make use of secondary data.
Sometimes even though you have primary data, respondents are not ready to share that data in such situations also secondary can help you in overcoming the challenge you're facing.

(iv) Data Analysis

Data analysis is important in research because it makes studying data a lot simpler and more accurate. It helps the researchers straightforwardly interpret the data so that researchers don't leave anything out that could help them derive insights from it.

Data analysis is the process of analyzing data in various formats. Even though data is abundant nowadays, it's available in different forms and scattered over various sources. Data analysis helps to clean and transform all this data into a consistent form so it can be effectively studied.

Once the data is cleaned, transformed, and ready to use, it can do wonders. Not only does it contain a variety of useful information, studying the data collectively results in uncovering very minor patterns and details that would otherwise have been ignored.

3. What is meant by Field method. Explain its importance and characteristics in Research.

Field research is defined as a qualitative method of data collection that aims to observe, interact and understand people while they are in a natural environment. For example, nature conservationists observe behavior of animals in their natural surroundings and the way they react to certain scenarios.

Importance of Fieldwork:

a. Helps us to understand how plants and animals relate to one another and their physical surroundings.
b. It provides students (and scientists) with a wide range of skills as they sometimes have to think "on the fly" that's something that cannot be replicated in a controlled situation.
c. Fieldwork often requires teamwork; it enhances our ability to be part of a team, working together in sometimes inhospitable conditions.
d. It promotes a conceptual understanding of concepts by bridging the gap between the classroom and the real world.
e. Fieldwork helps us learn to appreciate the world we live in as we see and investigate it through the eyes of the organisms being studied.

Characteristics of field research:

Field research has certain characteristics. The location of the phenomenon under study is perhaps the most important, as will be seen below.

It takes place outside the laboratory

The field investigation is carried out in the place where the phenomenon is to be studied. That means that "field" is really any geographic location that is outside of a laboratory or space with controlled conditions.

Data is collected in the field

In field research, the data or samples are sought in the place where the phenomenon under study takes place.

For example, if you are going to do research on school bullying, you have to look for the data in a previously selected school.

investment required

Field research needs a certain level of budget or, failing that, sponsorships or financial aid from organizations or individuals.

If a group of biologists in Mexico City wants to investigate the butterflies of Michoacán, the costs of that trip will be borne by the researchers or by the organization they work fo

4. Explain any two of the following :-

(i) Bibliography and Footnotes.

A bibliography is the list of sources a work's author used to create the work. It accompanies just about every type of academic writing, like essays, research papers, and reports.

A bibliography accomplishes a few things. These include:

- Showing your instructor that you conducted the necessary research for your assignment
- Crediting your sources' authors for the research they conducted
- Making it easy for anybody who reads your work to find the sources you used and conduct their own research on the same or a similar topic

Notes

Notes are references listed at the bottom of a page (footnote) or at the end of a research essay (endnote) that document sources or provide additional information to your reader. Acknowledging the work of other historians is an essential part of the process of writing a research essay. Notes tell your reader where you found your information and enable your reader to explore your ideas in more depth. Failing to acknowledge the words or ideas of others, and leaving the impression that they are your own, is a very serious offence. Scholars work extremely hard to produce books and articles

(ii) Conclusion and Synopsis

A conclusion is the final piece of writing in a research paper, essay, or article that summarizes the entire work. The conclusion paragraph should restate your thesis, summarize the key supporting ideas you discussed throughout the work, and offer your final impression on the central idea. This final summation should also contain the moral of your story or a revelation of a deeper truth. A good conclusion will wrap up your final thoughts and main points, combining all pertinent information with an emotional appeal for an ending statement that resonates with your readers. The purpose of a conclusion paragraph is to wrap up your writing and reinforce the main idea that you presented in the body of your paper. Conclusion structure is one of the key elements of academic writing. A conclusion ties in the initial thesis statement presented in the opening paragraph along with supporting points and a final impression that gives the reader closure. A well-written conclusion clearly relays the writer's take-home message. A strong conclusion can provide the reader with a different perspective or shed new insight on an old idea.

Synopis:

A synopsis is a brief summary which gives readers an overview of the main points. In an academic context, this is usually a summary of a text (a journal article, book, report etc) but in some instances you might be writing a synopsis of a talk, film or other form of presentation. A synopsis is a neutral summary, objectively capturing the main points, rather than your own perspective or critique, and it focusses directly on the text you're summarising rather than being a wider discussion of a topic, as an essay might be.

A synopsis aims to give the reader a full, if brief, account of the whole text so that they can follow its main points without having to read it themselves. It's not a 'trailer' designed to tempt your audience to read the text itself, so you don't have to worry about 'hooking' them in with hints and high points or 'spoiling the ending' - give the whole text equal coverage, including the conclusions. You could add some commentary which gives the reader a bit of context about the text, including the authors and circumstances it was written in

(iii) Table and Diagrams

Tables present lists of numbers or text in columns and can be used to synthesize existing literature, to explain variables, or to present the wording of survey questions. They are also used to make a paper or article more readable by removing numeric or listed data from the text. Tables are typically used to present raw data, not when you want to show a relationship between variables. Elements of a table include the Legend or Title, Column Titles, and the Table Body (quantitative or qualitative data). They may also include subheadings and footnotes.

Figures are visual presentations of results. They come in the form of graphs, charts, drawings, photos, or maps. Figures provide visual impact and can effectively communicate your primary finding. Traditionally, they are used to display trends and patterns of relationship, but they can also be used to communicate processes or display complicated data simply. Figures should not duplicate the same information found in tables and vice versa. Figures can take many forms. They may be graphs, diagrams, photos, drawings, or maps. Think deliberately about your purpose and use common sense to choose the most effective figure for communicating the main point. If you want your reader to understand spatial relationships, a map or photograph may be the best choice. If you want to illustrate proportions, experiment with a pie chart or bar graph.

5.What is meant by Piagiarism. Explain it in the light of Latest UGC rule.

Answers : The definition of plagiarism has been defined in Section 2 (k) of UGC Act 1956, the regulation as, "…an act of academic dishonesty and a breach of ethics. It involves using someone else's work as one's own. It also includes data plagiarism and self-plagiarism."

The inclusion of self-plagiarism is an interesting addition as it means that using your own previous work without adequately citing it has also been brought within the ambit of the definition. This idea may appear counterintuitive to the very soul of plagiarism which is stealing someone else's work but it is important to understand that representing old work as new work is stealing from yourself. It also defeats the purpose of research papers which is to present original work and the integrity of the work is marred.

Levels of Plagiarism and Its Penalty:

As per the regulations, plagiarism is divided into the following four levels based on the percentage of the plagiarized content, and the penalty for each level is also clearly mentioned:

Level	Margin of Plagiarism	Penalty for Plagiarism
Level 0	Plagiarism upto 10%	No Penalty
Level 1	Plagiarism upto 10%-40%	**For thesis and dissertations:** Resubmission of a revised script by the student within a time period not exceeding 6 months For academic and research publications: Withdrawal of the manuscript by the candidate.
Level 2	Plagiarism upto 40%-60%	**For thesis and dissertations:** Student will be debarred from submitting the revised script for a year. For academic and research publications: The candidate will be asked to withdraw the manuscript and be denied a right to one annual increment. Along with not being allowed to be a supervisor to any new Master's, M.Phil., Ph.D. Student/scholar for a period of two years.
Level 3	Plagiarism upto 60% or more	**For thesis and dissertations:** The registration for the programme for the student shall be cancelled. For academic and research publications: The candidate will be asked to withdraw the manuscript and be denied a right to two annual increments in succession. Along with not being allowed to be a supervisor to any new Master's, M.Phil., Ph.D. Student/scholar for a period of three years

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