question 3 answer

..process has eight distinct characteristics. These

are:

1. Research originates with a question or problem: Everywhere around us is filled with

many answered questions and unresolved problems. When we look around, we observe

things that make us wonder and to ask questions. These questions may start to spark

igniting chains of reactions which terminate in the research process. An inquisitive mind

is the beginning of research.

2. Research requires a clear articulation of a goal: It is critical to have a clear and

unambiguous statement of the problem. This statement gives you an exercise in
intellectual honesty. The ultimate goals of the research should be given in a

grammatically complete sentence which is precise and clear.

3. Research requires a specific plan of procedure: You should not hope that the data

necessary to solve the problem would somehow fortuitously come up. You have to have

rather a planned attack, a search ¨C and ¨C discover mission explicitly planned or designed

in advance.

4. Research usually divides the principal problem into more manageable sub?problems: A whole is made up of parts. This is a natural law universally accepted. So

when you think about your principal goal in research, try to observe this goal precept.

5. Research is guided by specific research questions, problems or hypothesis: These

guide you and direct you on what to do and how to do it in order to arrive at the solution

to the problem.

6. Research accepts certain critical assumptions: These must be self-evident truths.

These assumptions must be valid in order to make the research to proceed. You must let

others know what you assume with respect to your study.

7. Research requires the collection and interpretation of data: You need to collect

appropriate data, organize them in a meaningful way so that they can be analyzed and

interpreted.

8. Research is cyclical or helical: The process of research follows a cycle. It begins simply

and follows logical developmental steps.

question 4 answer
1 Empirical Enquiry

An empirical scientific research can be regarded as a way of looking at things. We can also think

of it as a method of approaching to the empirical world. You already know that science consists

of theory and facts. You also know that a fact is an empirically verifiable observation and a

theory tries to find relationships among facts. The facts of science are the products of observations. The construction of a theory is the most important purpose of empirical scientific inquires. Theory gives orientation to empirical inquiries it guides the collection of relevant date and offers conceptual scheme that will bind them together in a more systematic manner, theories are said to represent improvement in knowledge. This is the main focus in research. While theories help us to predict facts, facts help to initiate theories and to test the validity of existing theories. Facts clarify and redefine theory. But theories and facts stimulate each other and contribute to the growth of empirical knowledge.

Empirical studies make use of all research tools. These include observations, both participant and non-participant; interviews which can be structured, semi-structured and in-depth; key informant testimonies, analysis of personal and institutional documents, mass media analysis, examination of official documents and statistics, archival searching, review of published literature. Empirical social research employs a wide range and variety of analytical techniques such as ethnographic interpretations, historical reconstructions, action research, multivariate analysis structuralist deconstruction and semiological analysis.

Empirical Research Process

In empirical research method, you proceed in a systematic and orderly manner in order to pursue the truth as determined by facts and logical considerations. The main purpose is to find a systematic interrelation of facts by experimentation, observation and logical procedures. It means that it can only be conducted based on a rigorous impersonal procedure dictated by the demand of logic and objective procedures. The steps involved are

i. Data collection through careful and critical observation with patience, precision and impartiality

Measurement

Classification, Organization and Tabulation of data

Data analysis and Reduction

Formulation of hypotheses and

Formulation of theory and Law

The main features of empirical scientific research are:

Observation: In order to obtain knowledge, empirical research relies on observation. It is the cornerstone of any empirical inquiry. It supplies us with the thing that we try to understand and explain observation in an empirical research is not casual, but a conscious and deliberate activity designed to reduce error. It requires improved accuracy. It uses certain devices which add great precision to scientific observation. Meaningful observation results in the establishment of facts. These are used for verifying empirical

theories, building them and modifying or improving them.

Concepts: These are the building blocks of scientific empirical research. Theories consist of several inter-related concepts.

Although concepts are said to be fundamental to all human communication and thought, yet the concept we use in our day to day affairs are not always clear and precise. They have to be defined with precision to foster clear thinking; precise definitions convey exact meaning and explanation to both the empiricist and the readers.

Objectivity: This indicates that all the conclusions you reach in your empirical research are not affected by your personal views, values or biases. It permits repetition of observations under practically identical conditions, to get the same results. It facilitates the verification of facts and theories by many empiricists independently.

IV. Verifiability: The findings of your research are said to be empirical if only they can be verified. Any theory which contains facts that cannot be verified tends to be metaphysical rather than scientific. Therefore all empirical conclusions are liable for verification at any time. An empirical scientific theory of generalization stands to be rejected or modified at anytime.

Predictability: Accurate and precise predictions constitute one of the most impressive achievements of empirical researches. Predictability depends on the nature of the phenomena and our knowledge of the causes of the phenomena. If there is more number of causes predictions become more and more difficult. Prediction also depends on our ability to have precise theories and accurate measurement.

VI. Systematic Nature: Empirical investigations are systematic, thorough and rigorous in making use of designs to guard against errors from data collection, interpretation and generalization from the data. Empirical investigations are systematic in the methods used for data collection, formulation of hypotheses, data analysis techniques and the logic use for making generalizations. It self – correcting because you have the opportunity to find any flows that may come in at any stage of investigation. It is the systematic nature of empirical inquiry that distinguishes it from other non-scientific investigations.

question 1a

Let us start with what

research is NOT. According to him research is not:

Mere information gathering

Mere transformation of facts from one location to another

Merely rummaging information and

A catch word used to get information.

Leedy (1997) tells us that research is a process through which we attempt to achieve systematically, and with the support of data, the answer to a question, the resolution of a problem, or a greater understanding of a phenomenon.

question 1b

To understand these natural phenomena, three basic steps are recognized. These basic steps are:-

Accurate description

Explaining the specified conditions necessary to obtain the phenomenon in order to attain easy prediction of the phenomenon

Organizing the available evidence supporting the phenomenon in order to obtain an overall picture of the relationships surrounding all the components or variables relating to the phenomenon under consideration.

question1c

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Step I. identifying the problem

You have already studied this step in details in the last unit. But let us say that it involves the discovery and definition of scientific research problem within a topic area which you have chosen to study. It may include questions which require answer in our area of study. For instance, what are the causes and effects of lecturers strike on the standard of Education in Nigeria? Are men better managers than women?

Step II. Constructing Hypotheses

When you identify a researchable problem, it automatically leads to the proposition of a hypothesis as a tentative answer. Once you have identified a problem, you use the logical processes of deduction and induction to formulate an expectation of the outcome of the study. This expectation should be stated and tested. This implies that you are hypothesizing about the probable relationship existing between the concepts, variables identified in the problem. The hypotheses are the pointers to your solutions.

Step III. Identifying and labeling the variables

The next step is to identify and label all the variables in the problem and hypotheses stated. There are different types of variables in research. We shall look at them later.

Step IV. Proposing Operational definition of terms

All terms, concepts and variables should be converted from their abstract or conceptual forms to operational forms that can be quantified or measured using some forms of specified measurement

instruments. In technical terms, when you aperationalise the variables in your research, it means that you are stating them in observable and measurable forms which make them available for clear understanding, definition, manipulation, control and examination.

Step V. Manipulating and controlling variables.

If you have to manipulate and control the variables in your study, you must understand the concepts of internal and external validity. This is because you need to control or manipulate and regulate these variables in order to study the relationship between variables in research. You will have them discussed later.

Step VI. Constructing the Research Design

You can describe a research design as a specification or plan of operation for the testing of a stated hypothesis under a given set of conditions. It comes in specific types such as one-variable design, factorial design, experimental and quasi-experimental design etc.

Step VII. Identifying and constructing data collection Devices

After defining your variables and choosing the design for the study you need to adopt, adapt or develop some instruments for measuring the selected variables. You can use standardized instruments or construct your own as you have learnt in this course.

Step VIII. Constructing Questionnaires and Interview Schedules:

Most research studies in the social sciences and business rely on questionnaires and interviews as their source of data. You should employ recommended guidelines to develop and use these measurement devices for your data collection to test your hypotheses.

tep IX. Sampling and Collection of Data:-

As soon as you have got your instrument for data collection, you are expected to choose your respondents or subjects. You to do this according to some specified statistical methods of sampling either in the random techniques or non-random way. After getting your respondents or samples from the population of your target, you now administer the instruments to them in order to extract the needed information from them.

Step X. Carrying out Statistical Analysis or Data Analysis

The data you have collected above must be reduced, arranged and presented in an arranged and presented in an organized form for easy analysis. The data as organized are subjected to specified or suitable statistical indices for testing the hypothesis in order to generate some results or findings. From these conclusions, generalizations are drawn. You can employ the use of computers for easy and accurate data analysis. This aspect is very sensitive and requires some professional expertise, care and endurance.

Step XI. Discussion of Research Findings

You have to discuss at this stage, your research findings or the results from the data analysis. This

is to justify, interprete, explain and further develop a given theory for knowledge based on the findings generated. This is where you show your disposition and prowess. You have to note that the discussion flows normally in the context and direction of the information collected in the process of review of related literature. The implication is that you have to make thorough and adequate review of literature related to your topic or area of study. This is because sound literature review in research makes for very sound and balanced discussions of the findings or results.

Step XII. Drawing Conclusions, Generalizations and Recommendation

At this stage you are expected to draw your conclusions from your findings and to make generalizations of the findings generated from the samples to the larger population from which the sample was drawn. It is very important that your finding