



RESEARCH METHODOLOGIES AND TECHNIQUES DEVELOPMENTS

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Abstract:

The goal of the research article is to consider the problems, presumptions, and fresh aspects of the academic examination in relation to the components of the global alterations in all scholarly spheres. Additionally, it refers to assisting researchers in entering the increasingly globalised fields of research as well as enhancing their prospects of making an informed choice, finding respectable employment, and receiving recognition for their work. Due to this, a team of our researchers conducted a thorough inside-out investigation using cutting-edge procedures that combined both quantitative and subjective methods. A tonne of experimental data was obtained, arranged, and examined for the research, the main portion of which is presented here.

Introduction

The tactics, procedures, or techniques used in the gathering of data or evidence for analysis in order to unearth new knowledge or develop a better grasp of a topic are known as research methods. There are various research methodologies that gather data using various technologies. Sugiyono (2014:407) defines research and development as a process used to create a specific product and evaluate its efficacy. The term "research" should only be used in a technical meaning because it refers to an academic activity. According to Clifford Woody, conducting research entails defining and redefining problems, formulating hypotheses or suggested solutions, gathering, organising, and analysing data, drawing deductions, and coming to conclusions. Finally, the conclusions are carefully tested to see if they agree with the hypotheses that were originally proposed. Research is defined as "the manipulation of things, concepts or symbols for the purpose of generalising to extend, correct or verify knowledge, whether that knowledge aids in the construction of theory or in the practise of an art" by D. Slesinger and M. Stephenson in the Encyclopaedia of Social Sciences. Thus, research adds new information to the body of knowledge already in existence, thereby advancing it. It is the search for the truth via research, observation, comparison, and experimentation. In a nutshell, research is the process of seeking knowledge through an organised, methodical approach to a subject.

Aims of the research

The goal of research is to use scientific methods to find answers to questions procedures. Finding

the truth that is concealed and undiscovered as of yet is the major goal of study. Although each research project has a unique purpose, we can classify research objectives into the following major categories:

1. to become more accustomed to a phenomenon or to obtain fresh insights about it (studies with this exploratory or formulative research investigations are used to describe the subject under question);
2. To accurately depict the traits of a specific person, circumstance, or group. Descriptive research studies are those that focus on this object;
3. To establish the regularity with which something occurs or is related investigations that have something else in mind (known as diagnostic research) studies);
4. To investigate the possibility that two variables are causally related (such research is referred to as research studies that evaluate hypotheses).

Various research methodologies

Pure research, applied research, descriptive research, analytical research, basic research, conceptual research, empirical research, longitudinal research, laboratory research, exploratory research, and conclusion-oriented research are some of the several categories of research.

The significance of research methods

A research approach offers the study credibility and yields reliable scientific results. Additionally, it offers a thorough plan that aids in keeping researchers on course, facilitating a simple, efficient, and manageable approach.

Object of the research strategy

The exact steps or methods used to find, pick, process, and analyse information on a subject are known as research methodology. The methodology section of a research paper gives the reader the chance to assess the general validity and dependability of a study.

Research and development methods

R&D is often divided into three categories: development research, applied research, and basic research.

Research characteristics include:

In order to find answers to questions, research is the process of gathering, evaluating, and interpreting data. However, in order for a process to be considered research, it must, to the greatest extent feasible, be regulated, rigorous, methodical, valid and verifiable, empirical, and critical. • Controlled - in real life, there are numerous variables that can influence a result. The idea of command means that you set up your study with the intention of examining causality in connection to two variables (factors) in a manner that lessens the impact of other elements that influence the relationship.

1. Strict - You must be meticulous in ensuring that the steps taken to find solutions are rigorous answers that are pertinent, suitable, and justified. Once more, the level of rigour varies significantly both within and between the social sciences and the physical sciences.
2. Systematic - this suggests that the steps taken to conduct an investigation are a specific logical order. The various steps cannot be carried out randomly. Some others must come before procedures.
3. Valid and verifiable – this idea suggests that whatever conclusions you reach based on your

findings are accurate and are corroborated by you and others.

Research Techniques and Methodology

The phrases "research methods" and "research methodology" are sometimes used interchangeably. In a strict sense, they are not the same and exhibit differences. Research methods are the means by which you do research on a subject or a topic, and this is one of their main distinctions. Research technique, on the other hand, describes the ways in which you can carry out your research. Research methods entail performance of experiments, tests, surveys and the like. On the other hand, research methodology entails knowing the many methods that can be applied to the execution of tests, experiments, surveys, and critical studies in

addition to the conduct of research. This is the distinction between the two terms, research techniques and research methodology, on a technical level.

Research methods and instruments

Tools used to gather data include case studies, checklists, interviews, occasionally observation, surveys, and questionnaires. Since research is conducted in various methods and for various goals, it is crucial to choose the tools for data collecting.

General research instruments

Research tools are certain methods or techniques that a researcher use to gather, process, or analyse data. There are six common research tools: the library and its materials, the computer and its software, measurement techniques, statistics, the human mind, and language.

Concluding remarks

In the last ten years, psychology science has taken the lead in the movement to advance research techniques and methods in all scientific fields. The cutting edge methodological and statistical techniques described above are increasingly being used by researchers. In the meantime, the field keeps finding and refining new instruments for enhancing scientific procedures and practises. You can maximise the informational value of each study you conduct as well as the picture that emerges from syncing across multiple findings by understanding the fundamental ideas behind these tools and using them in your own research. By doing this, you will contribute to improving the standard of our cumulative and collaborative science.

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