



RESEARCH METHODOLOGY AND RESEARCH DESIGN

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Abstract:

Research methodology is the systematic, theoretical analysis of the procedures applied to a field of study. Methodology involves procedures of describing, explaining and predicting phenomena so as to solve a problem; it is the 'how'; the process, or techniques of conducting research. A Methodology does not set out to provide solutions but offers the theoretical underpinning for understanding which procedure, set of procedures can be applied to a specific case.

Research methodology encompasses concepts such as research designs, target population, sample size and sampling procedure, data collection instruments and data analysis procedure.

A research design is the set of methods and procedures used in collecting and analyzing measures of the variables specified in the research problem research study. The design of a study defines the study type (descriptive, co relational, semi-experimental, and experimental, review, meta-analytic) and sub-type (e.g., descriptive-longitudinal case study), research problem, hypotheses, independent and dependent variables, experimental design, and, if applicable, data collection methods and a statistical analysis plan. Research design is the framework that has been created to find answers to research questions.

Keyword: Research, Methodology, Research methodology, Research design.

INTRODUCTION:

Research is a point of view, an attitude of inquiry or frame of mind. Research is a studious inquiry or examination; esp. critical and exhaustive investigation of or experimentation having for its aim the discovery of new facts and their correct interpretation, the revision of expected conclusions, theories, or laws in the light of newly discovered facts, or practical applications of new or revised conclusions, theories or laws. Research is defined as the systematic and objective analysis and recording of controlled observations that may lead to development of generalizations, principles, or theories, resulting in prediction and possible ultimate control of events.

Now-a-days, higher education centers are much serious about imparting quality education along with research in all fields for the development of society at large. Many research scholars are engaged in research activities along with their academic activities. The society as well as higher education controlling authorities like U.G.C. and Quality Control authorities like NAAC

is insisting for research and development as well as quality education. In research activities, in social sciences, quantitative techniques are prevalent, current and popular too.

The society is transforming fast and changing according to the need of time in dynamic globalization process and progress. The society is not expecting only modernization but it is asking for quality with proof. Information has become a salable commodity of modern society. Society is dependent on perfect information based on research. The search of information through books, periodicals, journals and databases is a need of time, it is prerequisite for dynamic social order. Constant research and investigation has become the usual feature of modern society. The inquisition is a natural instinct of human being and research is the only answer to the endless inquisitions of human beings. The search for betterment and happiness of human beings is a constant and endless process. The age of computer has made revolution in the society at large because of its fantastic speed and accuracy. The process of advancement is not going to stop; on the contrary man is using his best talents for best achievements. The society is transforming from mere society to knowledge with micro specialization. The search of knowledge therefore has become a major feature of modern society.

Research addresses questions, which have hitherto not been addressed. It is not a mere theorizing facts and predicting results. It is an attempt to elicit facts and address the problem in scientific and systematic way by specifying solution to the problem on the basis of logical reasoning and analysis of the data collected. Methodology of research is the element, which maintains trustworthiness of research and directs the process and output of research. Methodology of research is decided with respect to type of research and objectives of research. It involves systematic procedures starting from the initial identification of the problem to its final conclusion.

Its role is to carry on the research work in a scientific and valid manner. It provides the tools and techniques by which the research problem is tackled. It consists of procedures and techniques for conducting a research. Research methodology comprises of activities as identifying problems, review of literature, formulating hypotheses, measurement, data, collection and analysis of data, interpreting results and drawing conclusions. Thus, research methodology consists of all general and specific activities of research. According to Sadhu Singh the methodology for any research study is drawn in a careful examination of the available literature and depends to a large extent on the imagination, long-term vision and understanding of the researcher. Methodology also depends on the problem undertaken for the study and objectives of the study.

1.1 problem of the study:

To study the 'Impact of Advanced Technology on Organization, Management & Administration of Co-Operative Sugar Factories in Maharashtra'.

1.2 objectives of the study:

The following are the objectives of the study:

1. To study use of technology in sugar factories pre 2000 and post 2000, till 2010.
2. To find out exact and accurate impact of advanced technology in the development of co-operative sugar factories organization, management and administration in Maharashtra.
3. To find out the sugar factories which need use of advanced technology and role of technology on organization, management and administration in sugar factories in Maharashtra.

4. To develop a suitable model of advanced technology for development of sugar factories organization, management and administration.
5. To give concrete recommendations / suggestions for use of advanced technology.

1.3 selection of the research method:

The researcher has chosen descriptive - survey as the method of research. The descriptive studies are further classified as survey studies, interrelationship studies and developmental studies.

The researcher believes that the data required for the study of the research does not exist but the settings do exist for generating the needed data.

A survey research can take a variety of forms. But there are certain elements common to these. The common elements are:

- a) Methods of gathering information are always systematic,
- b) There is always a population of interest represented by a sample or occasionally by census of respondents and
- c) Always the concern is with behavior of the members of the population interest.

Research methods are utmost important in a research process as they describe the various steps of the plan for tackling the problem of research. Research method suggests the manner in which the problem is formulated, the terms are defined, and the variables and subjects are chosen. It also suggests the validation of data gathering tools, the collection, analysis and interpretation of data, and the process of inference and generalizations.

1.4 descriptive survey method of research:

Survey research is one of the most important areas of measurement in social research. The broad area of survey research encompasses any measurement procedures that involve asking questions of respondents. A 'survey' can be anything from a short paper-and-pencil feedback form to an intensive one-on-one in-depth interview. Survey can be divided into two broad categories: The questionnaire and the interview. Questionnaires are usually paper-and-pencil instruments that the respondent completes. Interviews are completed by the interviewer best on the respondent says. Some-times, it is hard to tell the difference between a questionnaire and an interview for instance some people think that questionnaires always ask short close-ended questions while interviews always ask broad open-ended ones. It is seen that questionnaires with open-ended questions and there is often be a series of close-ended questions asked in an interview.

Survey research has changed dramatically in the last ten years. Increasingly, survey research has tightly integrated with delivery of service. At the hotel rooms on the desk waiter presents a short customer satisfaction survey.

Descriptive type of research is useful in the development of data gathering instruments and tools like checklist, schedules, scorecards, questionnaires and rating scales. This research utilizes questionnaires. As already stated one of this research is to make an assessment of 'Impact of Advanced Technology on Organization, Management & Administration of Co-Operative Sugar Factories In Maharashtra'. Therefore, none but the descriptive method of research suits this essay.

Descriptive research method has undoubtedly been the most popular and most widely used research method. At times, descriptive survey is the only means through which opinions,

attitudes, suggestions for improvement of practices and other data can be obtained. The descriptive investigations are of immense value involving problems in organizations, management and administration. Descriptive investigation provides that is useful to solve the problems in Co-Operative Sugar Factories in Maharashtra and suggesting means to overcome these problems. Descriptive research studies are designed to obtain pertinent and procure information concerning the current status of phenomena and wherever possible, to draw valid general conclusions from the facts discovered. They are restricted not only to fact finding but may often result in the formulation of important principles of knowledge and solution of significant problems concerning local, state, national and international issues.

CONCLUSION:

Research methodology encompasses concepts such as research designs, target population, sample size and sampling procedure, data collection instruments and data analysis procedure. The design of a study defines the study type and sub-type, research problem, hypotheses, independent and dependent variables, experimental design, and, if applicable, data collection methods and a statistical analysis plan. Research methodology comprises of activities as identifying problems, review of literature, formulating hypotheses, measurement, data, collection and analysis of data, interpreting results and drawing conclusions. The descriptive studies are further classified as survey studies, interrelationship studies and developmental studies. Research method suggests the manner in which the problem is formulated, the terms are defined, and the variables and subjects are chosen. It also suggests the validation of data gathering tools, the collection, analysis and interpretation of data, and the process of inference and generalizations.

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