

ETHICS OF RESEARCH METHODOLOGY

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ABSTRACT

Research is common parlance refers to a search for knowledge. It is an art of scientific investigation. Advanced Learners Dictionary of current English lays down the meaning of research as “a careful investigation or enquiry especially through search for new facts in any branch of knowledge”. Robert does defines research as “Research is essentially an investigation, a recording and an analysis of evidence for the purpose of gaining knowledge”.

According to Clifford research comprises defining and redefining problem, formulating hypothesis or suggested solutions, collecting organizing and evaluating data, making deductions and reaching conclusions and at last carefully testing the conclusion to determine whether they fit the formulating hypothesis.

Research is an academic activity. It enables people to find answer to various questions raised by them. It helps to solve problem confronted by individuals in their day to day life. Many people pursue research for the purpose of fulfilling the thirst for knowledge.

Knowledge can be gained through different ways such as method of tenacity method of authority and method of intuition. All these methods are unscientific and research is the only scientific method of gaining knowledge. Research Methodology is a specification of methods and procedures for acquiring the information need. It contributes the blue print for the connection, measurement and analysis of data. In this paper the following will be discussed about the Research Methodology:

1. Introduction
2. Basis of Research Methodology
3. Ethics in Research
4. Suggestions

KEYWORDS: Research, Ethics, Research Methodology, Research & Development

I. Introduction

In this paper only elementary aspects have been covered to make the faculty aware of the importance of research. It covers those aspects which are supposed to be “must known”. Before even writing even a simple research paper or making an Major/Minor Research Projects submitted by the students, a report is being prepared and presented as a part of a consultancy projects. It is imperative that all types of organizations need a systematic supply of information coupled with the tools of analysis for making sound decisions which involve, minimal risk. Hence, research methodology plays a paramount role.

What is research? A simple definition of research is:

- a. Search, search and search is called research, but it does not satisfy the novice researcher.
- b. Research is the systematic and objective process of gathering, recording and analyzing data for decision making. Re-search means to search again. It connotes patient study and scientific investigation, wherein the researcher takes another, more careful look at data to discover all that can be known about the subject under study. Applied research facilitates managerial decision making and reduces uncertainty. It is an amalgamation of techniques and procedures that helps the researchers to know and understand the phenomena in focus.
- c. Another most appropriate definition could be:- ‘it is neither an existing bag of techniques nor fishing expedition nor an encyclopedia gathering of assorted facts; rather it is a purposeful investigation, which provides a structure for decision making’. It has three main parts involved in investigation:
 - The implicit questions posed (or call it why?)
 - The explicit answers proposed (or call it what?)
 - Collection, analysis, interpretation of the information leading from the question to answer (or call it how?). This part justifies the recommendation and viewed as research.

II. Basis of Research Methodology

Faculty must understand well that in a professional Institute, research is bread and butter of everyone. Hence, one must understand the basics of it initially and subsequently grow with more and more research tools and software. Research may be in any of the management fields or other fields, but it must involve a systematic process and the researcher must know the type of research being under taken. There are two basic types of researches

A Exploratory Research:

- I. The literature survey
- II. The experience survey
- III. The analysis of ‘insight-stimulating’ examples

B conclusive Research:

Exploratory research gives rise to several hypotheses and they have to be tested for definite results. Hence, this research is exclusively used for the testing of hypotheses generated by exploratory research. This research can be classified:

- I. **Descriptive Research:** it is designed to describe something- e.g. the characteristic of users of a given product, the degree to which product used varies with income, age, gender or other characteristics. Descriptive studies vary in degrees to which a specific hypotheses is a guide. It allows both implicit and explicit hypotheses to be tested, depending upon the research problem
- II. **Experimental Research:** in this research, one or more variables are manipulated under conditions, which permits the collection of data that shows the effects. Experiments will create artificial situations so that researcher can obtain the particular data needed and can measure the data accurately. Experiments give more control over the factors they are studying. Hence, if they can control the factors which are present in a given situations, they can obtain more conclusive evidence of cause and effect relationships between the two.

Process in Research: Process involves few steps as given below

Steps	Activity	remarks
1	<p>Problem defined: Problem has to be very clear. The definition of problem is composed of three aspects:</p> <ol style="list-style-type: none"> Specification of the unit of analysis for study Identification of a particular unit and scope of study Specification of information sought concerning those units 	Provides clarity of thought and issue
2	<p>Research Design: it is known as a blue print for the research. The basic issues may be:</p> <ol style="list-style-type: none"> Is it an experimental design or non-experimental? No. of observations to be made for each unit? Should single sample be chosen from the same unit or series of samples be chosen from variables sub-groups? 	Type of research and how to go about it?
3	<p>Data Collection: Data collection involves the basic definition for the concepts to be investigated. It should include:</p> <ol style="list-style-type: none"> Design of instrument for recording the data, collection, mode may be; email, group discussion, personal interview, and so on 	Mode of collection with operational definitions and correctness of data
4	<p>Data Analysis: in this steps, data is processed to summarize the results. Data analysis can be classified in three categories:</p> <ol style="list-style-type: none"> Univariate Analysis Bivariate Analysis Multivariate Analysis 	Classification for the next appropriate steps
5	<p>Interpretation of results: interpretation of the research is 'so what' of a research. Research is useless unless it influences actions. The results must be recommended and communicated to the organization or subject unit. The end implementer/line manager, must understand the research and this familiarity is needed due to three reasons:</p> <ol style="list-style-type: none"> Implementer or User adopt or reject the recommendations. Hence, he must understand the proper interpretation of research and assumptions embodied in them. Line Manager knows the kind of questions research can handle and type of structure required for making a problem researchable Line Manager is a prime target for snow jobs from researchers. Hence, he should be capable of apprising the feasibility of research proposals. 	A key area of research to provide end results based on results and wisdom

III. Ethics in Research

The quote 'everything is fair in love and war' but is neither applicable to business nor to research. Hence, this section has been incorporated this analysis. The aspects of ethics are the creations of WW II and it revolutionized it, yet nothing is finalized. What is acceptable today may not be after a decade or so. Hence, as per the codes, it should indicate their boundaries as follows:

a) Boundaries of Competence:

- I. Researchers provides services, teach and conduct research only within the boundaries of their competencies, based on their education, training, supervised experience or appropriate professional experience
- II. Researchers provide services, teach or conduct research in new areas or involving new techniques only after first undertaking appropriate study, training, supervision.
- III. In those emerging areas in which generally recognized standards for preparatory training do not yet exist, psychologists nevertheless take reasonable steps to ensure the competence of their work and to protect patients, clients, students, research participates and others from harm.

b) Maintaining Expertise:

Research scholars who engages in assessments, therapy, teaching, research organizational consult ting or other professional activities maintain reasonable level of awareness of current scientific and professional information in their fields of activity and undertake ongoing efforts to maintain competence in the skills they use.

c) Planning Research:

It needs meticulous planning and proper follow up:

- I. Research scholars design, conduct and report research in accordance with recognized standard of scientific competence and ethical research
- II. Research scholars plans their research so as to minimize the possibility that results will be misleading
- III. In planning research, psychologists consider its ethical acceptability under ethics code. If an ethical issue is unclear, psychologists seek to resolve the issue though consultation with institutional review boards, peer consultation or other proper mechanism
- IV. Research scholars take reasonable steps to implements appropriate protections for the rights and welfare of human participants other persons affected by the search and the welfare of animals subjects

d) Responsibility:

Due care on the part of the guide and the researcher has to be taken care of depending upon the competence:

- I. Research scholars conduct research completely and with due concern for the dignity and welfare of the participants
- II. Research scholar are responsible for the ethical conduct of research conducted by them or by others under their supervision or control
- III. Researchers and assistants are permitted to perform only those tasks for which they are appropriately trained and prepared

- IV. As part of the process of development and implementation of research projects psychologists consult those with expertise concerning any special population under investigation or most likely to be affected

V.

e) Compliance with Law and Standard

Research scholars plan and conduct research in a manner consistent with union and state prevailing stature and regulations as well as professional standards governing the conduct of research and particularly those standards governing research with human participants.

f) Institutional Approval

Research scholars obtain from host institutions or organizations appropriate approval prior to conducting research and they provide accurate information about their research proposal or for that matter purely a Pilot study, before going for a major research

g) Research Responsibilities

Prior to conducting research psychologists enter into an agreement with participations that clarifies that nature of the research and the responsibilities of each party

h) Informed consent to Research:

Psychologists must follow certain norms:

- I. Research scholars use language that is reasonable understandable to research participants in obtaining their appropriate informed consent
- II. Using language that is reasonably understandable to participants, psychologists inform participants of the nature of the research; they inform participants that they are free to participate or to decline to participate or to withdraw from the research; they explain the foreseeable consequences of declining or withdrawing; they inform participants of significant factors that may be expected to influence their willingness to participate
- III. When research scholars conduct research with individuals such as students or subordinates, psychologists take special care to protect the prospective participants from adverse consequences of declining or withdrawing from participation.
- IV. When research participations is course requirement or opportunity for extra credit, the prospective participants is given the choice of equitable alternatives activities.

i) Dispensing with Informed consent

Before determining that planned research does not require the informed consents of research participants, psychologists consider applicable regulations and they consult with colleagues as appropriate.

j) Informed consensus to research Filming or Recording:

Research scholars obtains informed consents from research participants proper to filming or recording them in any form, unless the research involves simply naturalistic observations in public place and it is not anticipated that the recording will be used in manner that could cause personal identification or harm.

k) Offering incentives for Research Participants:

Incentives or an inducement is fare but there should not be any element of fear:

- I. In offering professional services as an inducement to obtain research participants, psychologists make clear the nature of the services as well as the risks, obligations and limitations especially while dealing with the patients or clients

- II. Psychologists do not offer excessive or inappropriate financial or other inducements to obtain research participants, particularly when it might tend to coerce participations.

l) Deception in Research:

No deception unless justifiable:

- I. Research scholars do not conduct a study involving deception unless they have determined that the use of deceptive techniques is justified by the study prospective scientific, educational or applied value and that equally effective alternative procedures that do not use deception are not feasible.
- II. Research scholar never deceive research participants about significant aspects that would affect their willingness to participate
- III. Any other deception that is an integral features of the design and conduct of an experiment must explained to participants as early as is feasible, preferably at the conclusion of their participation, but no later than the conclusion of the research

m) Sharing and Utilizing data:

Research scholars inform research participants of their anticipated or further use of personally identifiable research data and of the possibility of unanticipated future uses

n) Minimizing Invasiveness:

In conducting research, research scholars interfere with the participants or milieu from which data are collected only in a manner that is warranted by an appropriate research design and that is consistent with psychologist roles as scientific investigators

o) Providing participants with information about the study:

- i. Research scholars provide a prompt opportunity for participants to obtain information about the nature, result and conclusion of the research and psychologists attempt to correct any misconception that participants may have
- ii. If scientific or human values justify delaying or withholding this information, psychologists take reasonable measures to reduce the risk of harm.

p) Honoring Commitment:

Research scholars take reasonable measures to honour hall commitment they have made to research participants

q) Reporting of Results:

Results should be true and authentic in all respects:

- I. Research scholars do not fabricate date of falsify results in their publications
- II. If research scholars discover significant errors in their published data, they take reasonable steps to correct such errors in correcting, reaction, erratum, or other appropriate publications means

r) Plagiarism:

Research scholars do not present substantial portions or elements of another work or data as their own, even if the other work or data source is cited occasionally

s) Publication Credit:

Research scholars to ensure that due credit is given to the right claimant:

- I. Research scholars take responsibility and credit, including authorship credit, only for work they have actually performed or to which they have contributed
- II. Principal authorship and other publications credits accurately reflect the relative scientific or professional contributions of the individual involved, regardless of their relative status

t) Duplicate Publication of Data:

Research scholars do not publish, as original data, data that have been previously published this does not preclude republishing data when they are accompanied by proper acknowledgement

u) Sharing Data:

After research result are published, research scholars do not withhold that data in which their conclusions are based from other content professional who seek to verify the substantive claims through reanalysis and who intend to use such data only for that purpose, provided that confidentiality of the participants can be protected and unless legal rights concerning proprietary data preclude their release

v) Professional Reviewer

Research scholars who review materials submitted for publication, grants or other research proposal review respect the confidentiality of and the proprietary rights in such information of those who submit it

w) Manipulation of Data:

Authenticity of the source is must and at the same time, inflation of the data, manipulation or multiplication of data- all are unethical

IV. Suggestions:

Bases on experience and need of the day few recommendations/suggestions are given:

- a) In academics research should be equated with R&D of Industrial Engineering in the manufacturing unit. R&D is the heart and soul of the organization
- b) Like in many nations/universities without research, faculty is not recommended for the next increment or a promotion, it should be applied in good industries, as a matter of principle. Faculty may be made polish at least two research papers and participate in two conferences/workshops/symposiums.
- c) Research must be communicated to the concerned organization and it should be useful, so that the results are implemented for the benefit of the country/society in large
- d) Faculty should be made to attend conferences/symposiums/workshops to keep them apprised in the latest developments
- e) With introduction of computer, internets and latest software like SPSS, 6 sigma etc, the secondary research has become easy and faculty should keep abreast with the latest software available and there software are users friendly. Hence, should be used confidently.

*We cannot solve our problems with the same level of thinking that created them-
Albert Einstien*