

Vol 3 Issue 10 Nov 2013

ISSN No : 2230-7850

Monthly Multidisciplinary
Research Journal

*Indian Streams
Research Journal*

Executive Editor

Ashok Yakkaldevi

Editor-in-chief

H.N.Jagtap

Welcome to ISRJ

RNI MAHMUL/2011/38595

ISSN No.2230-7850

Indian Streams Research Journal is a multidisciplinary research journal, published monthly in English, Hindi & Marathi Language. All research papers submitted to the journal will be double - blind peer reviewed referred by members of the editorial Board readers will include investigator in universities, research institutes government and industry with research interest in the general subjects.

International Advisory Board

Flávio de São Pedro Filho Federal University of Rondonia, Brazil	Mohammad Hailat Dept. of Mathematical Sciences, University of South Carolina Aiken, Aiken SC 29801	Hasan Baktir English Language and Literature Department, Kayseri
Kamani Perera Regional Centre For Strategic Studies, Sri Lanka	Abdullah Sabbagh Engineering Studies, Sydney	Ghayoor Abbas Chotana Department of Chemistry, Lahore University of Management Sciences [PK]
Janaki Sinnasamy Librarian, University of Malaya [Malaysia]	Catalina Neculai University of Coventry, UK	Anna Maria Constantinovici AL. I. Cuza University, Romania
Romona Mihaila Spiru Haret University, Romania	Ecaterina Patrascu Spiru Haret University, Bucharest	Horia Patrascu Spiru Haret University, Bucharest, Romania
Delia Serbescu Spiru Haret University, Bucharest, Romania	Loredana Bosca Spiru Haret University, Romania	Ilie Pinteau, Spiru Haret University, Romania
Anurag Misra DBS College, Kanpur	Fabricio Moraes de Almeida Federal University of Rondonia, Brazil	Xiaohua Yang PhD, USA Nawab Ali Khan College of Business Administration
Titus Pop	George - Calin SERITAN Postdoctoral Researcher	

Editorial Board

Pratap Vyamktrao Naikwade ASP College Devrukh,Ratnagiri,MS India	Iresh Swami Ex - VC. Solapur University, Solapur	Rajendra Shendge Director, B.C.U.D. Solapur University, Solapur
R. R. Patil Head Geology Department Solapur University, Solapur	N.S. Dhaygude Ex. Prin. Dayanand College, Solapur	R. R. Yaliker Director Managment Institute, Solapur
Rama Bhosale Prin. and Jt. Director Higher Education, Panvel	Narendra Kadu Jt. Director Higher Education, Pune	Umesh Rajderkar Head Humanities & Social Science YCMOU, Nashik
Salve R. N. Department of Sociology, Shivaji University, Kolhapur	K. M. Bhandarkar Praful Patel College of Education, Gondia	S. R. Pandya Head Education Dept. Mumbai University, Mumbai
Govind P. Shinde Bharati Vidyapeeth School of Distance Education Center, Navi Mumbai	Sonal Singh Vikram University, Ujjain	Alka Darshan Shrivastava Shaskiya Snatkottar Mahavidyalaya, Dhar
Chakane Sanjay Dnyaneshwar Arts, Science & Commerce College, Indapur, Pune	G. P. Patankar S. D. M. Degree College, Honavar, Karnataka	Rahul Shriram Sudke Devi Ahilya Vishwavidyalaya, Indore
Awadhesh Kumar Shirotriya Secretary, Play India Play (Trust),Meerut	Maj. S. Bakhtiar Choudhary Director,Hyderabad AP India.	S.KANNAN Ph.D , Annamalai University,TN
	S.Parvathi Devi Ph.D.-University of Allahabad	Satish Kumar Kalhotra
	Sonal Singh	

**Address:-Ashok Yakkaldevi 258/34, Raviwar Peth, Solapur - 413 005 Maharashtra, India
Cell : 9595 359 435, Ph No: 02172372010 Email: ayisrj@yahoo.in Website: www.isrj.net**



SCIENTIFIC APPROACH TO EMPIRICAL RESEARCH



V. Vinod Kumar

Associate Professor English Bharathidasan University Tiruchirappalli

Abstract:-Every piece of research aims to produce an answer to a scientific question. And it is reasonable to ask just how good an answer the research provides. Research is a form of learning, a way of increasing one's knowledge about the world. A novice in research always has some pressing questions – How to start a research project? In what order to proceed with the empirical study? How to make the empirical research more reliable one?

Keywords:Empirical Research , Scientific , consulting authorities , learning.

INTRODUCTION

To what extent the sample respondents are dependable? – to be answered. As empirical research excludes knowledge obtained by consulting authorities, in books or in person, and includes only knowledge obtained from data resulting from first-hand observations, either by you or by someone else (Simon 6), these questions become more important. The paper focuses on enhancing the quality of a research work, particularly an empirical one in a more reliable way.

1. Fixing up a Research Problem:

The empirical research must begin with a careful consideration of a research problem. We must find out what is that we are trying to find out. We need the “exact question” to which we seek the answer, because research is not like answering examination questions; it is more like constructing the questions.

Therefore it would be helpful to consider the nature of a research problem. We have to confine ourselves to anyone of the following types of empirical research:

- 1.Descriptive Research
- 2.Classification Research
- 3.Measurement and Estimation
- 4.Comparison Problems
- 5.Finding Relationships
- 6.Finding Cause and Effects, and
- 7.Mapping System

2. The Purpose of the Research.

The next step that a research involves after selecting the “exact question” and “right method” is to find out the beneficiaries of this research finding or the use of the findings of the research, because the purpose and the destination of knowledge are important in deciding how to carry out the research. Here, we may also decide upon the usage of information that was already gathered by other

researchers. In an empirical research, though the field study is the primary source, we may sometimes depend on these already collected data to save time and energy.

3. Determine the value of the Research

It is equally important to choose among the possible subjects for research to obtain the greatest long-term benefit. This leads to the question of whether one should work on the most important problem, even if it is expected to take many years to complete, whereas another slightly less important problem would take less than a year. Whether pure or applied research, “the concern for man and his destiny must always be the chief interest among your diagrams and equations” (Snow 51). Before determining the value of the research, the researcher has to consider the following guidelines:

- 1.Empirical studies that test important theories are themselves important.
- 2.The more surprising and unexpected the result of the study, the more valuable is the study.
- 3.Results that offer the possibility of useful action are more valuable than results that close off the possibility.
- 4.The wider the application the more universal the conclusions drawn from the study.
- 5.The human importance of a study affects its value.
- 6.Interdisciplinary research works have greater values.

Thus the main concern of research is to obtain the greatest benefit for mankind.

4. Choosing Empirical Variables

At this stage, the researcher has to transform all his interesting ideas into empirical research problems. These research problems are to be narrowed down to a manageable size by choosing specific variables, so that it takes a reasonable length of time to finish the work. Eliciting response for these variables is based on putting down these variables in operational terms, or reducing your questions to

functional language. We should try to make questions as simple as possible in order to choose a satisfactory variable.

5. Evaluating the Input of Variables

The correctness of the input variables has to be ensured in an empirical study. We should know what price must be paid for an error, and how is an error defined; whether this error can be corrected subsequently or we have to withdraw the variable.

6. Choosing Methods.

Now it is time for one to ask how shall I gather the information I need and by what method? Research methods, including experiment and survey, cannot be satisfactorily classified in a one-dimensional, mutually exclusive scheme. But choosing a method depends on the evaluation of the following questions:

1. How relevant will the results be?
2. How clear will the results be?
3. How much will the method cost?
4. How accurate is the method?
5. How long will the method take to produce results?
6. Are there necessary personnel and equipment available?

As researchers, we should avoid limiting ourselves to a narrow choice of methods. Several methods together may provide better and cheaper answers than any single method can. Also, there are also many situations in which the researcher will do best to devote all their resources to a single best method.

7. Designing of the Method

Before collecting data, think in detail, the process involved in collecting the data. Plan everything before spending time, energy, and money. Pre-tests may help us plan the process. Try small pre-tests of method, materials, and assistants as long as it can be done effectively. The researcher should stay close to the work at this stage. If we use a questionnaire, try out the questions on friends whether the questions are intelligible and answerable with unbiased state of mind, and confirm that no two questions elicit identical answers.

If we are running experiments, we have to subject ourselves to the experiment because only then we can really understand the concept involved in it. Also pre-test the data sheets, because a well-constructed data sheet reduces later confusion. Data sheet has to be prepared in a way that it facilitates all kinds of processing either human coding or computer processing.

8. Collecting Data

No part of the process of data collection and data handling is free from human errors. Simple mistakes can creep in anywhere in writing down the data, transferring them from data sheets to automatic data processing software, and so on. The only remedies for the human errors in the data collection process are eternal vigilance, spot rechecking, checking the data against your intuition, and cross checking.

Unsound decisions about classification and

measurement are another major source of error in data collection. Sometimes, the researcher has to depend on research assistants to collect data. In that case, find capable assistants, train them well, check on them constantly, and ask them to consult with you each and every step they carry out.

9. Analysis of Data

After collecting the data, they must be rearranged and fiddled with to make them yield up the information they contain. What type of analysis a researcher should depend upon that type of research question that he seeks to answer. Here is a dilemma. To be an efficient researcher, one must have a good knowledge of statistics and probability. On the other hand, statistics is not synonymous with research or vice-versa. Great research has been done by men with no formal knowledge of statistics (Kinsey, et al. 35). Today, we have many user-friendly statistical software packages with which we can easily analyse the data even with limited computer knowledge.

10. Writing up the Research Work

The written description of research is part of the warp and woof of the research itself. In some kinds of research, we can often write up the report of the research before the data are collected, except the actual results. If this has been done well, almost half of the research job is done. Research reports should have scientific language, that is "objective," rather than "subjective," in both the words and concepts used.

Thus it is better to ask whether a piece of research is more or less scientific, because, in a scientific research, the researcher describes his empirical work in such a way that other people could repeat exactly what he did. Apart from repeatability, a researcher should bear all the points discussed above to make his research creditable and valid.

REFERENCES

- Cohen, A. *Language Learning: Insights for Learners, Teachers and Researchers*. New York: Newbury House, 1990. Print.
- MLA. *MLA Handbook for Writers of Research Papers*, 7th Edition. New Delhi: Affiliated East-West P, 2009. Print.
- Kinsey, Alfred C., Wardell B. Pomeroy, and Clyde E. Martin. *Sexual Behavior in the Human Male*. Philadelphia: Saunders, 1948. Print.
- Simon, Julian L. *Basic Research Methods in Social Sciences*. New York: Random House, 1969. Print.
- Snow, C.P. "On Albert Einstein." *Commentary* 43 (Mar 1967), 45-55. Print.

Publish Research Article International Level Multidisciplinary Research Journal For All Subjects

Dear Sir/Mam,

We invite unpublished research paper.Summary of Research Project,Theses,Books and Books Review of publication,you will be pleased to know that our journals are

Associated and Indexed,India

- * International Scientific Journal Consortium Scientific
- * OPEN J-GATE

Associated and Indexed,USA

- *Google Scholar
- *EBSCO
- *DOAJ
- *Index Copernicus
- *Publication Index
- *Academic Journal Database
- *Contemporary Research Index
- *Academic Paper Databse
- *Digital Journals Database
- *Current Index to Scholarly Journals
- *Elite Scientific Journal Archive
- *Directory Of Academic Resources
- *Scholar Journal Index
- *Recent Science Index
- *Scientific Resources Database

Indian Streams Research Journal
258/34 Raviwar Peth Solapur-413005,Maharashtra
Contact-9595359435
E-Mail-ayisrj@yahoo.in/ayisrj2011@gmail.com
Website : www.isrj.net