CHAPTER I

INTRODUCTION

To understand the world one lives in, to gain knowledge about the earth and beyond has always been a preoccupation with humankind. Over the centuries, different methods were used to acquire knowledge. Various schemes have been developed by epistemologists to understand the most popular methods adopted by cultures in their quest for knowledge: the methods of tenacity, authority, reasoning, rationalism, empiricism and science. The method of science, a combination of rationalism and empiricism, has been accepted as the ideal (Stewart, 2002).

The most important factor in favour of the scientific method is that “…the ultimate conclusion of every man shall be the same… there are real things, whose characters are entirely independent of our opinion about them…” (Peirce, C.S.).

Science aims to explain natural phenomena by conducting a “…systematic, controlled, empirical, and critical investigation of hypothetical propositions about the presumed relations among natural phenomena”.  

Scientific inquiry is formal and involves three basic stages: that of asking questions, observing to find answers to the questions asked and coming to conclusions, or ‘constructing answers’ (Littlejohn, 1996).

According to Gerald Miller and Henry Nicholson, inquiry is “nothing more…than the process of asking interesting, significant questions…and providing disciplined, systematic answers to them”.  

2. ibid, p. 11.  
Inquiry may be of three types: scientific, humanistic and social scientific.

Scientific inquiry is characterised by objectivity. Obviously, the scientific method is more suited to the study of nature; to the study of that which can be observed. Results are standardised and replicable (Littlejohn, 1996).

Humanistic inquiry on the other hand, is characterised by subjectivity. Interpretation is personal and the scholar looks in rather than out to understand something. The fields of art and philosophy make use of this kind of inquiry.

The social science approach borrows the methodology of both the scientific and the humanistic approaches, yet it is different. In the process of ‘scientifically’ observing human behaviour, it also takes into consideration the fact that each human being has his own levels of ‘humanistic’ knowledge (Littlejohn, 1996).

Of the three approaches, the study of communication follows the social scientific approach.

**Survey Research**

Survey research is a major quantitative, non-experimental, scientific methodology used extensively in the social sciences, including research in communication and media. The basic characteristic of the survey is the attempt to find relationships among variables without manipulation of the independent variable. Survey results depend on the responses of those questioned on important variables such as attitude and behaviour, demographics and psychographics.

According to Kerlinger, survey research “studies large and small populations (or universes) by selecting and studying samples chosen from the population to discover the relative incidence, distribution, and interrelations of sociological and psychological variables”.

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The modern survey can be traced back to the census. The essential difference between the survey and the census is that while the census studies the entire population, a survey takes samples from the population it is interested in. Hence the name sample survey.

The survey method was developed in the 19th century to document poverty following industrialisation and urbanization in Europe (Jensen, 2002). It emerged in the course of time as one of the most important means of research in the field of communication. This was achieved through scientists like Paul Lazarsfeld, who first used and popularized the marketing research survey technique for communication research in the United States. Under his leadership, the Bureau of Applied Social Research, Columbia, conducted landmark studies in mass communication, with a focus on quantitative methodologies, especially the survey methodology. His voter-behaviour surveys and related studies later with Katz led to the landmark Two-step flow theory of communication which changed the earlier thinking about mass media as being all powerful and of audiences as being passive (Rogers, 1994).

The survey method uses sophisticated questionnaires to study difficult variables such as attitude. Rensis Likert, for example, devised the Likert Scale, a popular method of measuring degrees of attitude. He also developed open-ended, intensive interviewing techniques in survey studies.

In the 1940s and 1950s, the focus of the survey method was on devising sophisticated sampling procedures that would make it a truly scientific process. Likert favoured the probability sampling technique and was responsible for the first true random sampling of a large and dispersed population. In 1946, Likert established the Institute for Social Research at the University of Michigan, famous today for its large-scale population surveys (Katz and Seashore, 1982).

Sampling is perhaps the soul of any survey, be it for cross-sectional or longitudinal studies. Researchers have to decide between probability sampling and non-probability sampling in order to achieve samples that are representative of the population.
Probability sampling, whose basis is randomisation, allows every person in the population an equal chance of being selected. While simple random sampling and stratified random sampling necessitate the existence of population lists, area sampling is a good alternative for a widely scattered population where getting a list of the areas covered is not impossible.

Non-probability sampling does not follow the principle of equal chances and is applied when the samples are unknown. This method follows, among other parameters, convenience and judgment. Purposive and quota sampling are two important methods of non-probability sampling.

On the basis of the study objective, a survey can be descriptive – just documenting a phenomenon or describing the current situation, or analytical – trying to find a relationship among major variables and test hypotheses (Jensen, 2002).

**Survey Types**

Surveys are categorised on the basis of the modes of communication used to administer questionnaires for data collection:

- Personal (face to face) survey or interview
- Telephone survey or interview
- Postal mail survey or interview
- Computer survey or interview
- Internet survey - Web survey and email survey.

Each survey type has its own advantages and disadvantages.

**Personal survey:** This refers to an interpersonal communication situation, and facilitates the administration of complex questionnaires. Both response rate and speed of response are known to be high. However, it is not suitable if the respondents are widely scattered, especially if there are budget and time constraints. Face-to-face interviews are also known to suffer from interviewer bias. Moreover, respondents may not be willing to give certain kinds of information.
Telephone survey: This happens on a one-to-one basis on the telephone. For large-scale telephone surveys, the CATI or computer-aided telephonic interview technique is used. Here, the telephone is attached to a computer, and the interviewer can directly enter data into the computer. This offers flexibility in terms of question sequencing, tabulation and analysis.

The telephone survey is known to have a higher response rate for short interviews. Costs are relatively low and telephone surveys are ideal for interviewing widely scattered respondents, especially if time is a priority.

Postal mail survey: This involves sending the questionnaire by post or as inserts with magazines or newspapers. It is cheap and ideal if respondents are widely scattered.

Since such interviews offer anonymity, respondents may be more willing to answer certain questions than they would be in face-to-face and telephone interviews. Respondents can also answer at their own pace and convenience, which is a definite disadvantage if time is a priority. Interviewer bias, which is a threat with face-to-face and telephone interviews, can be avoided here. The biggest disadvantage of this survey type is response – responses may be late or worse, most people don’t bother to return the questionnaires (Jensen, 2002).

Computer survey: The procedure in such a survey involves keeping a computer with the appropriate software in a central location, and inviting people to volunteer to fill the questionnaire. Obviously, this is possible only in non-random-sampling situations.

Its greatest disadvantage is the obvious fact that the survey depends on volunteers to fill in questionnaires (Hawkins & Tull, 2001).

Internet survey: Questionnaires are hosted on a Web site – either on a new one or on a popular site – in Web surveys. People are invited to take part in the survey.

This has the disadvantage of being passive. Also, the respondent is anonymous.
The email survey has a slight advantage over the Web survey in that the receiver of the mail knows that there is a survey he/she can take part in. However, it suffers from the same disadvantages as postal mail. Respondents may choose to ignore the mail or take their own time filling it and mailing it back to the sender.

The biggest technical disadvantage in Internet survey is sampling.

**Choosing the right survey type**

Once the researcher decides on survey methodology for the study, he/she has to decide on the best mode or type of communication to administer the questionnaire. The researcher, in certain cases, may adopt more than one mode for simultaneous use (multi-mode). Important parameters that need to be kept in mind in the process of selection of survey type are (Hawkins and Tull, 2001):

**Response rate:** Response rate is defined as the “number of completed interviews with responding units divided by the number of eligible responding units in the sample”.

The personal survey is known to achieve higher response rates than the other survey modes.

**Complexity of questionnaire:** For complex questionnaires personal interviews are ideal since they allow for clarification of doubts by the respondents. This includes the use of TATs and other projective techniques. Computers and telephone interviews are helpful.

**Amount of data:** Personal/face-to-face interviews are known to help collect a large amount of data. Refusal rates for telephone interviews are known to be high if the interviews are long. The effort required to fill up a questionnaire also influences response.

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**Accuracy of resultant data:** A variety of factors, such as sampling, questionnaire design and so on, can influence accuracy of data. While personal surveys are advantageous since they allow for clarification of doubts, the flip side is that the interviewer’s attitudes may bias the response. The more complex or vague the questionnaire, the more inappropriate they are for computer, postal mail and Internet surveys.

**Sensitive questions:** Such questions might actually be best answered using the postal mail or computer surveys.

**Interviewer effects:** These are obviously high with personal/face-to-face and telephone interviews. Postal mail, email and computer surveys do not suffer from interviewer effects.

**Sample control:** The personal interview has the highest control over the sample. Both postal mail and email require addresses, while the telephone survey is restricted to those who have telephones.

**Time requirements:** The telephone interview tops the list here, while mall-intercept interviews are also fairly quick. Email is also advantageous. Postal mail responses may take at least two weeks to come.

**Costs:** Personal interviews are generally more expensive than other types of surveys, especially if the respondents are widely scattered, the sample size is large and the questionnaire is lengthy. While the email mode is the cheapest, the local telephone interview is also inexpensive. While postal rates are low, a large sample size and the length of the questionnaire increase the expenses substantially. Telephone interview costs should include expenses incurred in callbacks and additional telephone interviews done to achieve the desired sample size.

**Research in mass media**

Research in mass media began with the study of media usage for propaganda during World War I. Advertisers initiated much of the research conducted on radio and
television audiences in the 1950s and 1960s. Rising concern among citizens and authorities with violent media content especially in television, and its influence on children and youth triggered off a series of sponsored and academic research on media effects. As the media grew into huge, profitable institutions with a bewildering number and variety of consumers (audience) media institutions began conducting research to beat competition and gain high TRPs (Wimmer and Dominick, 2003).

The authors identify four main phases of media research. These phases, according to them, repeat every time a new communication technology is introduced, not necessarily in the same order.

Phase I of research focuses on the medium of communication as a technology and a source. Phase II is concerned with the various uses the new medium can be put to, and on the users of the medium. Phase III focuses on effects and Phase IV on ways to improve the medium. Media research may be academic or sponsored by various interests: by the advertiser, by the media themselves, by governmental authorities, by NGOs and so on. Important research areas include research on media effects, media application and uses, print media research, broadcast media research, new media research.

New Media

New Media are digital technologies that combine the unique features of older technology such as telecommunications, satellite technology and broadcasting to form new, interactive, highly networked communication channels. Popular new media are the computer and computer-mediated communications such as the Internet, the mobile phone, Direct to Home TV, Internet Protocol TV and so on.

New media are characterised by digitality, interactivity, hypertextuality, dispersal and virtuality (Lister, M., Dovey, J., Giddings, S., Grant, I., & Kelly, K., 2003).

**Digitality:** New media are commonly known as digital media or media that make use of computers. Digital technology simply assigns numerical values to a
phenomenon. These numerical values are binary in character, that is, 0 and 1, which signifies the on or off state. During the last part of the 20th century, this digital technology was being used in the communications and entertainment media. Soon, even analogous media texts were being converted into digital bits. The advantages of digitising are: capacity to input large amounts of data, extremely quick access to data, and a very high rate of change of the data accessed.

**Interactivity:** Digitality also has the advantage of interactivity. Interactivity is considered one of the most important characteristics of new media, something that distinguishes it from and makes it superior to the ‘old’ media like television, radio and the print media. New media audiences can not only access text and images but also change, modify and edit them, making them active participants or users of media. Computer-mediated communications such as email, MUD, blogs, chat, etc., are a result of this capacity for interactivity.

**Hypertextuality:** According to Lister et al (2003), “The prefix ‘hyper’ is derived from the Greek ‘above, beyond, or outside’. Hence, hypertext has come to describe a text which provides a network of links to other texts that are ‘outside, above and beyond’ itself”.

The hypertext helps a user navigate to relevant links all over the World Wide Web. **Dispersal:** Whereas ownership and control of old media like the print and broadcast media are highly centralised, the Internet allows for a decentralised pattern of production and distribution. It is highly individualised and closer to everyday experiences than other media.

**Virtuality:** New media, especially the Internet, offers metaphorical space and place to users of the Internet. Online experiences are virtual, intangible in terms of the space and place where it happens, yet, not imaginary. Communication and interaction

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seem to take place in the nowhere land, to be experienced but not seen, the virtual ‘social space’ (Jones, 1999). This creates a duality in our daily experiences, not seen with the other media.

**The Internet as new media**

A combination of two terms: inter (between or among the other) and net (short for network), the Internet can be defined as “…the specific name of the communication network that is comprised of millions of interconnected computers that freely exchange information with each other worldwide”.\(^7\) Anderson, Bikson, Law and Mitchell (1995) call it an ‘amorphous network’.

**Internet communication**

The internet is unique in that as a medium of communication, it allows for communication flow at several levels:

**Intrapersonal:** the blog is a site for self-expression, like the personal diary; only anyone interested can access it. So it is both intrapersonal and one-to-many.

**Interpersonal:** The email is an excellent one-to-one communication situation. The email can also be one-to-many.

**Group:** Online groups that form a communication network among interested/likeminded people offer a group communication experience. So is chat at the level of group communication.

**Organisational:** All organisational/corporate Web sites operate at an organisational level, providing information about the organisation to their various publics.

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**Societal:** Network groups like Orkut are online societies by themselves. Other offline groups based on religion, geography, etc., also have their own online networks.

**Mass:** The internet is also a medium of mass communication, widely dispersed, carrying information and entertainment to all those who can access it.

**Internet and Research**

The Internet has opened up several possibilities for research in mass communication – as a phenomenon that needs to be studied, explained, analysed and described, as a source of data, and as a tool for research. It has thrown open an entirely new world, a new culture and new social networks, requiring a whole new world of studying it – to understand, to predict, to control and to improve.

Research into this new, ‘personalised’ mass medium is crucial. The uniqueness of the Internet is that it is not only a medium that should be researched and understood, it is also used as a tool for research.

Popular areas of study/research on the Internet are:

**As a technology.** A lot of research is being done in the technical area of Internet functioning. Internet technology is constantly innovating and improvising.

**As a media text.** The Internet, with its mind-boggling variety of content including text, multimedia and graphics; is an ideal media text for textual analysis, the most popular being discourse and rhetoric analysis.

**As a source of data.** The Internet is a virtual library with large amounts of information on various topics. It is therefore an extremely important source of data for academic and other research. Of course, credibility is still an unresolved issue, and this itself is an important topic to be researched upon.

**As a virtual network society/community.** Online groups, chat rooms, MUDs, emails, blogs: all these have created virtual communities that are a fascinating area of study for Internet researchers.
As a medium with social and cultural effects. This is one of the most important areas of research. Several areas of research can be identified here: the digital divide, influence on communication and interaction behaviours especially among youth, the various uses and gratifications provided by the Internet, ‘positive’ effects and ‘harmful’ effects and so on.

As entertainment. The Internet offers music, videos, films, games and several other forms of entertainment, the uses of which and the regulations regarding which are important areas of research.

As an economic enterprise. Web management and economics is one of the most important areas of interest today.

As a medium that requires rules and regulations. This is another extremely important concern and issue. Important areas that require attention are IPR, web crimes of various types, especially financial crimes, and web pornography.

As a news medium. The Internet is also gaining popularity as a news medium. Popular newspapers today have their online versions, and there exist several purely online ones. Citizenship journalism is another important concept. The Internet as a news medium opens up innumerable areas of research.

As a tool for communication. Communication happens at the intrapersonal to the mass level on the Internet. At each level, there are different sources, messages, receivers, feedback and effects; all of which offer an inexhaustible and exciting area of research.

As a tool for Public Relations. Corporate websites, newsletters, and ezines among other things offer varied topics for research.

As a tool for advertising. Research on online advertising can range from types and effects to costs and the study of the web economy itself.
As a tool for development. The Internet, along with the other ICTs, is a valuable tool for development. Its use and applications in the areas of health, education, employment, environment etc., is an important research focus today.

As a tool for research. Two basic kinds of surveys are conducted on the Internet: the Web survey and the email survey.

The Web survey involves putting a questionnaire on a web site and giving an opportunity to the visitor of the site to fill in the questionnaire.

Indian scenario

India has shown a surprising growth in information technology. A mere ten years after the world’s first computer, the ENIAC, was developed in 1945 at the University of Pennsylvania, India acquired its first computer, with the Indian Statistical Institute, Calcutta being its proud owner. By 1972, there were 172 computers in India, and three-fourths of them were made by IBM (Singhal and Rogers, 2001).

As the number of people using the computer rose to millions in the 1990s, it began to be used for communication messaging along with computation. India saw large-scale computerisation in the 1980s and 1990s, thanks to the economic liberalisation under Prime Ministers Rajiv Gandhi and P.V. Narasimha Rao. ‘Assembled’ computers, which were cheaper than the regular ones (priced at Rs.50,000), offered an attractive alternative to the educated middle –class Indian. Various financial schemes also helped popularise the PC. However, the rate of adoption of personal computers in India in 2000 was only 1%. Internet Cafes or Cyber Cafes soon dotted the cities and major towns to provide access to the computer and Internet at a nominal fee (Singhal and Rogers, 2001).

Rapid advances in telecommunications, helpful government policies, a fast growing software industry, the large numbers of IT professionals, and a growing understanding of and a need to be part of the global information society by the upper and middle educated class in India- all these factors and more, helped the enormous growth of the Internet in India. Additionally, the importance given to
ICTs for development in various areas like health, education, employment, commerce, financing etc. helped focus on infrastructure needed for the rapid growth of the Internet and other convergent technologies, including the mobile phone.

**Computer Mediated Communication: The electronic mail (email)**

Anderson et al define the email as ‘…a form of information interchange in which messages are sent from one personal computer (or computer terminal) to another via modems and a telecommunications system.’  

A more comprehensive definition is given by the same authors: ‘An electronic mail system:

1. permits the asynchronous electronic interchange of information between persons, groups of persons, and functional units of an organization; and

2. provides mechanisms supporting the creation, distribution, consumption, processing, and storage of this information…’

Being digital in nature, the email or the electronic mail enjoys all the features of a digital medium. It provides for almost instantaneous transmission of messages, it is interactive, it can be edited, deleted, stored or forwarded to more than one address simultaneously. The email is also flexible; the message can either be part of the email itself or sent as an attachment. The email is a unique one-to-one communication situation, allowing for a one-to-many type of communication situation whenever required. The email address, unlike the traditional postal address, need not reveal the true identity of the person who holds the address, the email user is anonymous; thus protecting his/her privacy. This privacy is strictly not as private as a user thinks, his/her

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9. ibid; p5.
online movements and networks are followed closely by other web sites, who use this information to send promotional email periodically. Still, on a personal basis, it still remains private.

The email user has the additional advantage of knowing the subject matter (to an extent) of the email as indicated in the inbox column, and therefore can decide if the mail should be opened or not.

The important features (read advantages) of the email are as follows (Anderson and others, 1995):

- The email can be stored in the mailbox until it is accessed by the receiver, that is, until the receiver goes online and checks the mailbox. Obviously, this is convenient since both parties need not be online at the same time, say like when they use chat.

- Since it is digitalised, it arrives in a readable form, can be edited, stored, deleted or forwarded.

- The speed of the email enables messages to be transmitted worldwide within minutes.

- A very important aspect of the email is that it need not carry only text. Messages could include pictures, graphics even videos.

**The email as a survey tool**

The email, in addition to being used for personal and business purposes, is also an important tool for survey. Survey researchers were quick to utilise the opportunities provided by the email as a survey tool: questionnaires could be sent to individual addresses in record time, its interactivity allowed respondents to fill in answers and mail it back in record time. Time constraints taken care of, the ease with which data collection could be done also meant reduced costs. The email proved to be an exciting, media rich tool for survey. Researchers used the email for survey purposes as long ago
as the 1980s, and much research on how effective it is as a tool has been done since then. The email survey is a more personal method of research where the questionnaire is mailed to an address; and the likelihood of it being noticed is higher than with a web survey.

While web surveys are mainly used to study large groups of people who use the Internet, email surveys, older than the web survey; is mainly used to study smaller, online groups.

According to Sheehan and Hoy (1999), web based surveys and email surveys have some advantages and disadvantages:

- **Penetration.** No other medium in the past has achieved the kind of popularity that the Internet has, in such a short period of time. It is easily accessible and popular in the developed world; and countries like India are fast catching up in terms of penetration. Part of its popularity lies in the fact that it is easy to use, and involves little effort.

- **Accessibility of names.** While the web survey does not need to get addresses, it is especially important for email surveys. Getting email addresses is extremely cumbersome.

- **Anonymity** and **confidentiality** are two important advantages of the web and email surveys. Respondents remain largely anonymous, and their responses are confidential.

- **Cost benefits.** Internet research is relatively inexpensive, since it costs little for transmission and does not involve any paper work.

- **Ease and flexibility of responding.** Both the web and email survey are easy and flexible to use.

- **Response time benefits.** The benefits of email in terms of time can be enormous.
• **Response rate benefits.** This criterion is one area of internet research that has not been empirically conclusive.

Some major disadvantages identified by them are:

- **Random sampling** is difficult in an email survey, except in rare cases, relating to small universes, for example, an employee based survey/study within an organisation.

- **Unsolicited** surveys normally do not get responses, they are even considered rude. The subject line plays a very important role in deciding whether to open an email or not.

- **Changing addresses.** Not only do email addresses tend to change, some people may have more than one email address, thus confusing things further.

- Both email and web surveys are **passive**, the web surveys more so; since they have to be seen by the person online.

- **Technicalities.** It is possible that respondents do not know how the technicalities of filling in an online questionnaire.

- **Identifying duplicate responses and non-response.** These are real problems with both the web survey and email survey. One can never be sure if the same person has answered more than once, and equally difficult to get back to the people for responses.

**Justification for the Study**

The Web and the email continue to be used as tools for survey, and the usefulness of these as survey tools are a matter of great interest among researchers. Email surveys involving larger populations are rare, and the effectiveness of the email as a tool, especially for such surveys, is not clearly established (Sheehan and Hoy, 1999). Also, as they suggest, effectiveness of the email as a survey tool may differ from country to country. Though global in nature, the Internet has been introduced, adopted,
promoted and used differently and at different periods; thus making any study on the Internet area specific, and at the same time global; reinforcing the post modern nature of the new media

The interactive and dispersed nature of the Internet allows for greater participation of people, which makes them active ‘users’ of the media in the real sense of the term (Burnett and Marshall, 2003). The Internet allows for public participation in literally all areas of life: personal, social, political, economic, commercial, educational, academic, and research, to name a few.

It is in this context that the researcher tried to study the participation of people online in the academic and research efforts of researchers. The research in question was to study the effectiveness of the email as a survey tool in mass communication research. Obviously, the more the participation by the people (here, as respondents), the more effective it is considered to be. Two other important factors are speed of response and the costs incurred. To make the study design more complete, and also with an interest in finding out how the other mediated tools fare as survey tools in India, the traditional postal mail and the telephone have also been studied for their effectiveness as survey tools in mass communication research.

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