Chapter I

INTRODUCTION

“Soft Skill is utterly important for every individual to sustain and grow in any work place and in life”

Soft Skills is a term used in the industry to denote a person’s EQ (Emotional Quotient) rather than his technical or professional skills.

They are skills relating to one’s personal attributes and soft skill encompasses of others, personal, communication, social and self-management behaviours. They cover a wide spectrum of personal traits and abilities including but not restricted to being reliable, trustworthiness, adaptability, personal integrity, leadership, social grace, time management, awareness, likeability, attitude, team building, influencing skills, etc. It talks about how a person reacts and interacts in the work place, and in life and how effectively he deals with his managers, co-workers, subordinates and others in general.

1.1 Importance of Soft skills

A soft skill has been there for ages, since the advent of human interaction. People learn it on their own or learn it by seeing other’s success. Even about a decade ago, soft skill was not something that people explicitly would talk about. Though management people tell that ‘soft skill’ is nice to have, they do not give it the respect or weight-age that it should be given. All this has been changing slowly. People have started acknowledging the importance of soft skills.
Soft skills are as important as traditional hard skills regardless of industry. Soft skills do complement hard skills and needs to be clearly understood. At the same time hard skills cannot be replaced with soft skills. Soft skills play very important role in personal and professional life. Companies observe that they get people with definite hard skills but fail to get people with good soft skills.

Companies have started understanding and acknowledging the importance of Soft skills and are investing in training its people on soft skills. At workplace, they want to see more people with the various soft skill traits. It is very important that everyone learns and upgrade themselves on soft skills. A key soft skill is something that people should follow as an ongoing process throughout their life. Identifying soft skills that one has and enhancing them and upgrading on the other soft skills will help one grow in life. Soft skills may be improved in various ways. Some of the methods may include taking courses on specific skill set. Others would include seeking help from peers and seniors or managers. Self training and reading books is another way to improve on the soft skills. Soft skills should be practiced and improved on a regular basis. Soft skill is not something that can be taught but must be learnt by oneself with lots of practice. There are courses which can guide us on soft skills.

1.2 Attributes of soft skills

Employers are now looking for people who can do more than just perform a set of tasks. Employers are increasingly searching for more than a qualification and highlighting soft skills can put at a considerable advantage over similarly qualified candidates. In addition to key competencies like strong analytical skills, reasoning skills and a proven ability to manage complex information that employers are looking for desirable soft skills which include:
1.2.1 Interpersonal skills

Interpersonal skills of an individual are traits that include communication, confidence in interacting with others, problem solving, decision making and personal stress management. Strong interpersonal skill makes a person successful in personal and professional life. One should be trustworthy and have pleasant manners and appealing to others. Dealing with other people, be considerate of colleagues and others be able to settle disputes amicably, be a good communicator, have great problem solving skill are some of the important interpersonal skill traits. Judging people is one of the ‘should NOT have’ traits.

1.2.2 Communication Skills

Communication Skills are very important to everyone and it is the most important soft skill that needs to be taken care of. It tells about how one sends and receives information, ideas, opinion and how one conveys their own thought process. It is very important to communicate with others so that they rightly understand what we are trying to tell them and also understand what others want to say or communicate to us.

1.2.3 Writing skills

Writing skills varies on what is being written. It asks for a different style while writing research proposal, business letters, memos, personal letter. While writing, one has to take care not to use slangs, abbreviations or symbols. Written communication has a purpose which has to be understood clearly by the recipient. A simple write-up with short sentences and easy to understand words without use of jargon is always recommended.
1.2.4 Time Management

Time management plays a crucial role in any work environment as well as in life. Proper planning helps in proper execution. Every individual should be self-disciplined when it comes to time management. Basic principles of time management may include preparing a charter of the work that needs to be performed, directing the effort towards completing the work at hand in time, reducing time wastage. Some of the menace of ineffective time management includes poor prioritization, failing to clarify what is required, underestimating the effort (time required to complete the task). It is very important to manage time in one’s personal and professional life. Upon managing time efficiently, one would have enough or sufficient time to take up other tasks.

Time management involves planning, organization, implementing, and controlling. A proper time chart is a must to be followed to efficiently track and time. The task may be organized properly keeping the time planned in mind to achieve or complete the task. Organizing involves scheduling the time for the various tasks leading to the goal. Efficient time management may include good planning, efficient time estimate prioritization of task. Maintaining and abiding by calendar and using check list.

1.2.5 Team Work

A Team or group is essential to complete any task. Be it in a sports field or workplace, a good team with great teamwork can create wonders. They would succeed in many of the work taken up. Like in a team sport wherein the bonding of the team and team work plays a crucial role in winning any game, the same applies to work place and also in personal life. A good team would work in coordination towards a common
goal and help each other whenever required. One member of the team would put in extra effort and help another team member when wanted. It is an important trait expected in each one of us. One should have the ability to work in a team. The members in a team should not have ego and should be ready to help one another when required and expected. Each individual in a team should be aware of his/ her responsibility towards the team, should be cooperative, able to understand the issues of other members of the team, value their importance in the team.

Soft skills are also categorised in the following manner. They are:

- Communication skills
- Interpersonal skills
- Positive attitude
- Values
- Perception
- Etiquette
- Creativity
- Problem solving
- Decision-making
- Coping with time
- Coping with stress
- Coping with emotions
- Teamwork
1.3 Exhibiting soft skills

The demonstration of key skills should be an ongoing process throughout the working career. It is essential to demonstrate the strengths by finding an example of when certain skills are used and to think about what, when, why and how of every situation and this should help to enhance the credibility.

1.4 Identifying soft skills

It is required to think about which soft skills are in use in day-to-day life. These personal traits make a man unique. Asking friends, family or colleagues to write down the good and not-so-good traits and have a look at consistencies in their responses will help identify the strengths and allow working towards removing weaknesses. Looking into the skills and experiences that would be required in the type of job a person is seeking / performing. It could be done this by contacting a recruitment consultancy asking what the fundamental requirements are. Job postings and vacancy specifications would also give an idea of what personal qualities are desirable.

1.5 Methods of improving soft skills

Having identified certain skills to improve and develop to match the job, a plan could be developed. Identifying the goals and the steps needed to achieve it which are put in a time frame will define how the things are known, when the goals are reached and how that goals are used to measure the success.
1.6 Bibliometrics

The branch of library science concerned with the application of mathematical and statistical analysis to bibliography; the statistical analysis of books, articles, or other publications.

E.W Hulme the pioneer of the study of statistical bibliography stated the purpose of bibliometrics as "To shed light on the processes of written communication and of the nature and course of development of a discipline. By means of counting and analyzing the various facts of written communication Pritchard also interpreted its purpose in a slightly different version by Hulme. Scharder (1981) says, "The objective of bibliometrics as a scientific study is to produce ideas that is, theory about recorded discourse and its various important properties."

O'connor and Voos (1981) have pointed out: "The scope of bibliometrics includes studying the relationship within a literature of describing a literature. Typically, these descriptions focus on consistent patterns involving authors, monographs, journals or subject/language"

1.7 Bibliometrics : Scope

Bibliometric is the technical name for a range of analytical methods using information-quo-information found organised in bibliographic description of reading materials such as books, periodical article, reports, patents, software, designs, prototypes and blueprints to develop descriptive statistics, multidimensional analyses ad graphical representations of the output of science. Bibliometrics is often used to
Clarify and assist in the analysis and formulation of science policy by highlighting the networks of players or subjects that make up scientific research;

Provide strategic analysis of the relative position of research performers;

Sketch profiles of the activities and performance of individual centers;

Graphically present studies of strategic or innovative subjects;

Publication counts, involving counting of scientific publications published by a researcher or a research group;

Citation counts, involving identifying the number of times a specific article is cited in other scientific journal publications; these measures are considered to address questions of quality, influence, and the transfer of knowledge;

Co-citation analysis, identifying pairs or groups of articles that are cited together in other articles or publications; from these pairs or groups of articles a ‘cognitive structure’ can be derived, providing information on the direction and flow of scientific thought;

Co-word analysis, involving assigning keywords to a paper or article by a professional reader; papers which have the same keywords and sets of words are linked to each other via a clustering techniques;

Scientific mapping, involving developing a visual model or ‘map’ of the realm of scientific fields representing the structure of literature output of particular scientific fields”.

Bibliometric studies fall mainly into two broad groups

Those describing the characteristics or features of literature (descriptive studies), and
Those examining the relationships formed between components of literature (behavioural studies, sometimes referred to as citations studies, but not restricted to them)

The descriptive studies are probably the most easily understood, and can be thought of as resembling in many ways – population census. Both have to provide comprehensive and accurate data about rapidly changing population in one case, of people and in other, of literature. Literature descriptions are assembled from the bibliographic study those that provide data on the condition or character of the literature as a whole. The present study falls under the category of Descriptive Study since it is based on the mapping of the subjects.

1.8 Bibliometrics: Definitions

Alan Pritchard (1969)\(^1\) defines bibliometrics as, "the application of mathematical methods to books and other media of communication."

According to Fairthorne (1969)\(^2\) "Bibliometrics is the quantitative treatment of properties of recorded discourse and behavior appertaining to it."

Potter (1981)\(^3\) defined bibliometrics as "the study and measurement of the publication pattern of all forms of written communication and their authorship."

Sengupta (1990)\(^4\) defines it as the "organisation, classification and quantitative evaluation of publication patterns of all macro and micro communications along with their authorships by mathematical and statistical calculus."
1.9 Bibliometric Laws

Bibliometric Laws are statistical expressions which seek to describe the working of science by mathematical means. The three basic laws in bibliometrics are:

1. **Lotka's inverse square law of 'Scientific Productivity'**
2. **Bradford's 'Law of Scattering of Scientific Papers'**
3. **Zipf's 'Law of Word Occurrence'**

1.9.1 **Lotka's Law**

In 1926, Alfred J Lotka proposed his Inverse Square Law correlating contributors of scientific papers to their number of contributions. His law provided fundamental theoretical base for bibliometric studies invoking authorships. He was interested in determining "the part which men of different calibre contribute to the progress of science". For this, he checked the decennial index of 'Chemical Abstracts' 1907-1916 and counted the number of names against which appeared 1, 2, 3 etc., entries. He tabulated the data for 6,891 names, beginning with letter 'A' and 'B'. Similarly the data from the Auerbach's Geschieftafein der physik was also collected for the 1325 physicists. Lotka then plotted the graph on a logarithmic scale, the number of authors against the number of contributions made by each author and he found that in each case the points were closely scattered about a straight line, having a slope of approximately two to one. On the basis of these data, Lotka decided a general equation, for the relation between the frequency ‘y’ of persons making 'x' contributions as follows $x^n y = \text{constant}$ and for the special case $n=2$, the constant is 0.6079. Further he summarized the results as follows:
"In the case examined it is found that the number of persons making 2 contributions is about one fourth of those making one contribution, the number making 'n' contributions is about 1/n2 of those making one and the proportion of all contributions about 60 percent".

In other words, for every 100 authors contributing one article, 25 will contribute two articles, about 11 will contribute 3 articles and 6 will contribute 4 articles and so on. Though, the law was based on the study of chemistry and physics literature later it has generated much interest and attracted the attention of researchers and it has been applied and tested in many other fields.

1.9.2 Bradford's Law of Scattering\(^6\)

Samuel Clement Bradford, another pioneer of bibliometrics should be considered for his classic paper “Source of Information on Specific Subjects”, which is the first paper published on observations on scattering. Bradford examined two bibliographies prepared in the Science Library (Britain) on Applied Geophysics (192831) and lubrication (193132) and he prepared lists of journals arranged by decreasing order of source items contributed by the journals to the bibliographies. He noticed that in each subject there were a few very productive sources, large number of sources of constantly diminishing productivity. The whole range of periodicals was thus seen as "a family of successive generations of diminishing kinship, each generation being greater in number than the preceding, and each constituent of generation producing inversely according to its degree of remoteness".
In the list of periodicals ranked by diminishing productivity, Bradford identified three groups of periodicals that produced approximately the same number of articles on the subject, but the number of periodicals in these three equiproductive zones increased by a constant factor. Based on this he stated his law as follows: "If scientific periodicals are arranged in order of decreasing productivity of articles on a given subject that may be divided into a nucleus of periodicals more particularly devoted to the subject and several groups or zones containing the same number of articles as the nucleus when the number of periodicals in the nucleus and succeeding zones will be as 1: n: n^2 Bradford also plotted graphs of the cumulative number of source items R(n) versus the logarithm of the cumulative number of journals (log n). The resulting graphs for Applied Geophysics and Lubrication were similar to the graph shown in figure. Such a graph is sometimes called as Bradford bibliograph.

The graph begins with a rising curve AP1 and then continues as a straight line. The rising part of the graph represents the nucleus of highly productive journals. The points P1 and P2 and P3 on the bibliography are the boundaries of three equiproductive zones in which the same number of articles as the nucleus (represented by 0y1y2=y2y3) derived from an increasingly larger number of journals (represented by 0x1 ,x2 and x2,x3). The law attracted the attention of many researchers in the field and has been the main topic of many articles in the literature.

1.9.3 Zipfs Law of Word Occurrence

G.K Zipf developed and extended an empirical law, as observed by Estoup, governing a relation between the rank of a word and the frequency of its appearance
in a long text. If V is the rank of a word and 'f' is its frequency, then mathematically Zipfs law can be stated as follows: \( rf = c \), where 'c' is a constant.

His law states that in a long textual matter if words are arranged in their decreasing order of frequency, then the rank of any given word of the text will be inversely proportional to the frequency of occurrence of the word. Thus, these three laws are respectively based on (i) number of authors contributing in a discipline or other field (ii) distribution of articles in a set of journals and (iii) ranking word frequency in a particular set of documents.

1.10 Need for Study

The need of soft skills depends very much on the context and one’s personal perception. However, there is one property that immediately comes to most people’s mind when soft skills are mentioned: those are the communication skills. Certainly, it is the talent of communication skills, which is mostly lacking. When asking people what exactly they understand to be communication skills, one will receive a wide range of answers, because communication skills include a lot of different aspects.

Since the researcharies a library professional have taken this study by accepting the fact that there is a need to study the trends of various prominent facets which are highly required for any manager.

1.11 Statement of Problem

Research in social science has resulted in enormous growth of reports, articles, conference proceedings, technical reports, research notes, research reviews and monographs. A Statistical analysis of such literature produced in the different form is
required to quality to know the nature of published literature, which is the sum of
current knowledge. A bibliometric study is one such approach which can be aid in
doing so. Therefore, bibliometric analysis can be carried out on any form of
quantitative analysis relating to production, distribution and use of published or semi
published literature. In the present study an attempt has been made to know research
trend in soft skills by applying simple bibliometric measurement.

The researcher projected to carry out as it was observed that there was no study in
the literature about the publication productivity of soft skills. The Research topic of
the present study is on “Research Productivity in Soft Skills: A Bibliometric
Study”. The main aim of the study is determine the growth of literature,
geographical and year wise distribution, authorship pattern, core journals, prolific
author, publication type etc. by the research publication of web of knowledge for the
period of 1999 to 2012. The appropriate bibliometric laws has been analysed in this
research.

1.12 Objectives of the study

The researcher has framed the following objectives by keeping the content and
meaning of the study:

1. To identify and analysis growth rate of soft skills;

2. To assess the forms of publications in which the soft skills is communicated;

3. To measure and calculate the relative growth rate and doubling time for
   publications and pages using exponential growth model;

4. To analyse the type of co-authorship pattern and examine the extent of
   research collaboration among soft skills;

5. To examine the continent-wise research performance of soft skills;
6. To identify the different subfields of soft skills;
7. To apprehend and test the applicability of various bibliometrics laws;
8. To compare the soft skills output of various continents with world output using Science productivity index and Author productivity index;
9. To identify the geographic distribution of journals from which the contributions of soft skills got published;
10. To suggest a rational strategy for research and development in soft skills based on the findings of the study;

1.13 Hypotheses

The following hypotheses were formulated and tested with appropriate statistical tools:

1. There is an inverse relationship in the number of authors and the number of papers published in the field of soft skills.
2. There is variation in authorship pattern among the scholars of different geographical locations.
3. There is distribution of research literature in the field of soft skills confined with the Bradford Law.
4. There is an inverse relationship in the number of papers published and number of journals in the field of soft skills.
5. The productivity of authors in soft skills research confined with Lotka Law.
6. There is a significant association between the most prolific authors and number of citations.
7. There is an association between the GDP and research productivity of the country.
1.14 Significance of the study

This study provides the quantitative and qualitative analysis of the progress of Soft Skills, as reflected in its publications output reported in the mainstream of national and international journals. The main objective of the present study is to examine the status of Soft Skills at the global, its strong and weaker areas of research, quantity and quality of research output and dynamics of research across institutions, sectors and geographical regions and subjects.

Therefore, a clear understanding of the characteristics of the subject literature is one of the prerequisites and has paramount importance in planning and designing of information systems and services. Under these circumstances, the results of the study will add to the body of the knowledge within information science, help and promote research within the studies of soft skills and supply information providers such as librarians and information professionals with a better understanding of the needs of the research expertise as they exercise bibliographic control and plan for research and development. Such a study may prove useful for International Skills planners and developments and policy-makers for gaining macro insights into the global development of Soft Skills.

Also this study attempts to explain to emergence of research area in soft skills such as growth rate, areas of research concentration, research performance of various institutions and author productivity. The published literature in soft skills is taken as a yardstick to measure the knowledge in a discipline. The growth rate analysis of publication could yield some useful results regarding growth pattern of literature and scientific productivity of authors in the discipline.
1.15 Limitation of the Study

The study covers a period of fourteen years only spanned between 1999 and 2012, both years inclusive. Records for the analysis of this investigation have been extracted from Web of Knowledge. Database of records taken for analysis is exclusively from Web of Knowledge which follows its own standard for the inclusion or exclusion of sources. Though the data may exist outside Pure Science and allied subject are in ample, this investigation has not included any from other sources or online database.

1.16 Organisation of the Study

The research thesis of the present study has been divided into five chapters. A brief description about these chapters is given below:

Chapter - I

The first chapter ‘Introduction’ highlights on various characteristic related to the study of Soft skills, bibliometric, background and statement of problem, objectives, hypothesis, significance of the study, limitations and organisation of the study.

Chapter - II

The Second chapter on ‘Review of Related Literature’ is to bring out the facts and figures of the previous studies that have been carried out in this area. The various kinds of literature reviewed for the present study includes theoretical as well as empirical.
Chapter - III

This chapter on ‘Research Design’ provides a detailed outline of Scope of the Study, data collection source, method of data collection, various bibliometric indicators and statistical tools used in this study.

Chapter - IV

This chapter is ‘Analysis of Data’ highlights on the evaluation of research productivity in soft skills. The facts and figures of the quantitative data analysed using various bibliometric indicators have been presented in detail and systematic manner.

Chapter - V

The most important chapter findings and Conclusion discusses the entire range of the study in a complete manner. This chapter provides the findings, implications and suggestions. It is given nearby of the areas to be determined in future.

The study is also appended with a select bibliography and the publications published in the journals.
REFERENCES


