CHAPTER 1

Introduction

1.1 Background and Concept

Man’s quest for knowledge has led to the creation and augmentation of the tremendous amount of information and knowledge. Since the beginning of human civilization, all humans are attributed to have managed knowledge, and it is because of their shared knowledge, civilizations have evolved. For the benefit and welfare of the public and the society, the knowledge generated through different processes needs to be managed and for such a notion the concept of Knowledge Management has come into progress. Knowledge is something gained through experiences and expertise. Some experiences are in documented form (explicit) and some part of it remains embedded in the minds (tacit). Knowledge Management, as the name depicts is the management of both tacit and explicit knowledge, through the support of good information technology (IT) infrastructure. In the present era, it is a hot topic not only in the organizations but also in different disciplines, which may include Business, Engineering, Information Management, Communications, Education, or any other having the same area of interest. Knowledge Management has evolved from techno-centric to intellectual Capital-centric applications and revolves around the concepts of Ikujiro Nonaka, Hirotaka Takeuchi and many other authors who brought formality to the managing of knowledge. At the very beginning of its emergence the scenario was quite different than of today, the main focus was purely internal to resolve the issues within the organization through the use of technology, but today the scope of KM is broader and covers the knowledge beyond and outside the organization. Because of its multidisciplinary nature, many definitions can be sketched from the literature. Many of them are defined below:

- “Knowledge Management is a broad process of locating, organizing, transferring, and using information and expertise within an organization” (Broadbent, 1998).
- “Knowledge Management is the utilization of total knowledge assets, both explicit and tacit in an organization promoting, evaluating, retrieving, and
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sharing, through dissemination, in terms of products, processes, services, customers, and personnel” (Albert, 2000).

- “Knowledge Management is the systematic process of identifying, capturing, and transferring information and knowledge people can use to create, compete, and improve” (Gao & Clarke, 2008).

- “Knowledge Management is the systematic process and strategy for finding, capturing, organizing, distilling and presenting data, information and knowledge for a specific purpose and to serve a specific organization or community” (King, 2005)

Even if concept of Knowledge Management is related to business field, but in practice, its significance is in all public sectors benefiting to the society, whether through academics, business, health sector, or any other in societal context. The motive of Knowledge Management is not only in managing the knowledge but is augmented in bringing out the profits from intellectual resources of an organization. Knowledge Management has many processes that ensure improvements in the ensuing work process of organizations by using their earlier knowledge. It can also be noted out from the literature that many organizations use KM for a variety of reasons, it may have different nature of work process in business organization than in academia, but the reasons behind its deployment in any firm is typically same which may include: to increase innovation, to better organizing the corporate knowledge, to put together organizational memory, and at last the most important, to provide a best possible means or platform for collaborative learning. Many countries across the world, especially the developed ones, are putting their maximum efforts to develop the practical systems for managing their knowledge. Some have put forward the blueprint of the system and few have developed the practical KMS’s: some of the systems may include Development Forum (Dev forum) developed by World Bank solely for the employees of their organization or the IBM which in 2000 has taken an initiative by developing the Communities of practices numbered around 60 in which 20000 employees had participated in a community (Gongla & Rizzuto, 2001).

Besides business world, KM also results in inputs from people of different fields including academia as in Management, Sciences, Social Sciences, Law, etc. Knowledge Management can be mystifying name for many; however its roots are
ingrained in many fields of Social Sciences purview; Anthropology, Education, Economics, Sociology, and others. A Social Science is considered to have a more vital responsibility into development of the humankind; as of its much importance to human beings than the other fields. Social Sciences enable us to better understand ourselves, which in turn helps to understand how the world works. Once we are able to understand that, then only it is possible to find the root causes of society’s problems and we will be able to find more effective solutions. It is because of the study of Social Sciences we attain such a stature that can help us to improve our society as also it focuses on investigating about the society and the association between individuals existing in it. As we know there are lots of issues that the world is facing today, they might be social or medical. Social Scientists show good hand in solving all these critical issues that the world is facing, in which the role they play in fighting the spread of infectious diseases like Ebola crisis in West Africa can be quoted one among the best examples. Other than these, Social Scientists have shown their metal in Engineering and in defense also.

In the light of above lines it can be also put forth that for upbringing of peace and prosperity to the society in whatever capacity, the need of the hour is to manage the knowledge pertaining to the umbrella linking multiple fields of Social Sciences to smooth the progress of collaborative learning and knowledge production.

1.2 Statement of Problem

From the in-depth literature survey along with the study regarding the KMS and also to the best of investigators knowledge it is quite clear that, until today, there is no Knowledge Management System found in Social Sciences. Hence the topic for present research was selected as “Knowledge Management System in Social Sciences: Design and Development”, aimed at studying the present scenario of Knowledge Management System, with a view to design and develop a dynamic model of KMS pertaining to the field of Social Sciences, by taking in one of the premier Academic institutions of India i.e. Aligarh Muslim University as a sample base for the study. The problem has been preferred to set up a model of a KMS with the main aim to make both explicit as well as tacit knowledge, which has been left unnoticed over the period of years in Social Science research, available to the users all the way through design and development of the Knowledge Management System/portal,
attempted for the first time in the available literature. Hence, the research regarding the same is purely new in the present situation, which will be having greater importance in management of intellectual assets for supporting knowledge generation, discovery, storage, and networking, as a result providing a platform for community learning.

1.3 Terms used in the Statement of Research problem

1.3.1. Knowledge

According to Webster’s third new international dictionary, Knowledge is:

‘The fact or condition of knowing something, with a considerable degree of familiarity gained through experience of or contact or association with the individual or thing so known.’

1.3.2. Management

Collins English Dictionary and Thesaurus dictionary defines Management as

‘The technique, practice, or science, of managing or controlling’

‘The skilful or resourceful use of materials, time, etc’

Oxford Advanced Learner’s Dictionary also defines Management as

‘The act or skill of dealing with people or situations in a successful way’

1.3.3. System

Oxford Advanced Learner’s Dictionary defines System as

‘An organized set of ideas or theories or a particular way of doing sth’

1.3.4. Social Sciences

According to the Webster’s third international dictionary, Social Science is

‘The branch of Science that deals with the institutions and functioning of human society and with the interpersonal relationships of individuals as members of society’

Encyclopedia Britannica, defines Social Sciences as the discipline that

‘Deals with human behavior in its social and cultural aspects, include the following disciplines: Anthropology, Sociology,
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Economics, Political Science, and the study of International Relations.

1.3.5. Design

According to “Oxford Advanced Learner’s dictionary”, the word ‘design’ connotes two perspectives:

1. Arrangement: It is the simple arrangement of the different parts of something that is made such as building, machine, etc.
2. Drawing/plan/model: Is the process or art of choosing how something will look, work etc. by drawing plans, making models etc. (“Design”, 2000)

1.3.6. Development

According to “Oxford Advanced Learner’s dictionary”, the word ‘development’ is also having two different perspectives and is defined as:

1. Growth: the gradual growth of something in regard to become much advanced, stronger etc.
2. New product: the process of producing or creating something new or more advanced. (“Development”, 2000)

1.4 Aims and Objectives of the Study

The technology driven era of today has demanded the management of the whole bank of knowledge which is based on modern tools and techniques and hence Knowledge Management System (KMS) was restructured. The major objective of the study is to describe KMS and its development in Academics, particularly in Social Sciences. The study would be of immense importance not only for institutions but also for a whole academic world which includes experts, researchers, and students as well.

The objectives of the study are:

- To study the concept of KM from its origin till present time.
- To develop the knowledge surroundings by proactively making it possible and pleasing its generation, discovery and networking.
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➢ To bring forth the knowledge pertaining to the field of Social Sciences on a single platform for facilitating access to the users.
➢ To smooth the progress of developments of knowledge and it’s sharing between individuals and organizations.
➢ To create a KMS model in the term to smooth the progress of collaborative learning and knowledge production for higher education.
➢ To evaluate the functionality of the developed KMS and come up with the feedback of different category of Users of the faculty of Social Sciences at AMU, Aligarh.

1.5 Scope and Limitations of the Study

In present times, Knowledge Management has application in almost every sphere and in all sectors, including both Private as well as Public organizations. It is considered to be the main aspect of novel knowledge and indeed of new ideas to the new-fangled process, to innovative products, services, and explanations (Goel & Singhal, 2005). In academia, the concept of KM is new and has a great role to play in terms of meeting the Institution’s knowledge needs. The research output of institutions is not only useful for their parent institute but also for academia as a whole.

With the shrinking library budgets and the mounting price of journals, it becomes quite critical for the libraries to afford the journals which are even extremely valuable. The open access movement has positively brought out new ways for institutes to deal with the unavailability of the vital literature.

The present work is an effort to design and develop the KMS in Social Sciences, the developed system will not only provide access and visibility to the research output in the field of Social Science but also provides a platform that facilitates both tacit knowledge sharing as well as explicit knowledge Sharing, its tabbing, and undeniably its Networking. However, there are restrictions for the researchers to go beyond a certain limit that is why in the present case the scope of the study was limited to the Faculty of Social Sciences which was selected out of a total no. of 13 Faculties\(^1\) of Aligarh Muslim University.

\(^1\) Faculties. Retrieved September 15, 2018, from https://www.amu.ac.in/faculties.jsp
1.6 Research Methodology

The research methodology is a way to resolve the research problem. It is the systematic approach, that describes various steps, used by a researcher in studying and solving a research problem, with a precise mechanism that include various methods, tools, and techniques etc. used in conducting the study.

In the present study, the methodology used is realistic and analytical in approach that includes the use of diverse research techniques to carry out the study. The methods used to put up the thesis are given as under:

1. After discussing the concepts of Knowledge Management, its tools, and Knowledge Management System, their detailed view was given in non-profit organizations such as Libraries, Education, Health, Law firms, Police, and also in Profit making organizations which include: Banks, call centers, etc. with their respective sub-sections as operational in many fields were thoroughly discussed.

2. As the present study is first of its kind on the Topic Knowledge Management, the investigator has first dealt with Theoretical, Conceptual Knowledge creation models of Nonaka Takuechi, Von Krogh and Roos, Boisot model, Choo model, Wiig model and many others already in use.

3. In the next step the investigator accessed management systems belonging to the two categories namely corporates (Airtel, IBM, Access, Vmware) and those of non-profit organizations. The aim of such an evaluation of KMS’s in both the categories was to know their individual structure and functioning.

4. Thereafter, a conceptual framework for the KMS model was developed, consisting of three main components namely Knowledge Repository, E-learning and Tacit knowledge.

5. Recorded inputs from the evaluative studies were made the basis of the development of taxonomy of the model KMS.

6. After the taxonomy of KMS was developed, many software packages were evaluated so as to judge their suitability and availability for the design and development of the KM System.
7. To build the Knowledge Repository component of the KMS, the users of the KMS i.e. Faculty members, Research scholars, and Librarians of the Faculty of Social Sciences, Aligarh Muslim University, Aligarh, and few subject experts from other institutes were given privilege to update their profiles. Furthermore, video lectures of faculty members for E-learning element were recorded and uploaded on the site, under development.

8. The data collected for the first two components may be in two forms i.e. born digital and in print form.

9. For the third element of the KMS i.e. tacit knowledge, the system was developed in such a way that the experts/peers or any user (registered) interested in the subject can share their experiences whenever or wherever they want to and also can have a solution to problems with the team of experts spread over globe.

10. After the design and development of the KM system, it was made live and was simultaneously tested by three categories of users, viz Faculty members, Research Scholars and Librarians of the same faculty under study by using different parameters.

1.7 Hypotheses

The Hypotheses being a tentative statement brings clarity to the research problem as it provides a focused study, clarifies certain aspects of a research problem that has to be investigated, helps out in identifying what data to collect and what not, enhances objectivity of the study, and makes it easy to conclude with what is true and what not.

In so far the present study is concerned, having studied the problem in all its dimensions certain hypotheses may be formulated as follows:

1. KMS being a new concept especially in academia, there is lack of awareness of KM amongst different categories of Users.

2. About 80% of Academic community in Social Sciences has not used any KMS for their studies and Research.

3. Hardly there is any proper mechanism of knowledge sharing between experts, research scholars, and Librarians, except KMS.
4. User friendliness of any KMS will attract the members of academic community to a great extent.

5. KMS developed for academic world must be equipped with self uploading and editing of contents.

6. KMS in Social Sciences will result in collaborative learning, resulting in enhancement of Knowledge.

1.8 Standard Followed

American Psychological Association (APA, 2010) (6th ed.) format has been followed for providing bibliographic references.. Some examples are given as below:

**Journal Article (Print)**


**Journal Article (online)**


**Books (print)**


**Books (online)**


**Web sources**


1.9 Organization of the Thesis

The thesis is of three folded segmentation i.e. Chapterization, Annexure, and Bibliography. The first part consists of seven chapters, each signifying different attributes of the research work under study.
Chapter 1: Introduction

This chapter provides an extensive overview of the subject of research followed with "statement of research problem, objectives of the study and the research methodology" used to carry out the study.

Chapter 2: Knowledge Management and Knowledge Management Systems: An Overview

Subsequent to a brief overview of Knowledge and Knowledge Management, the chapter further defines and describes the processes of Knowledge Management, Models of KM, different KM Systems and technologies, followed by the brief concept of managing the tacit knowledge.

Chapter 3: Review of Literature

This chapter reviews the relevant literature already published on the research topic. It aims to study the various aspects of the problem and the emerging trends pertaining to the Knowledge Management in general and Knowledge Management Systems, in particular. To make it more presentable respective sub-sections of KM and KMSs as operational in educational, healthcare, banking sectors etc have been framed. The chapter provides complete bibliographical references both offline as well as online, on various aspects of KMS including management of knowledge, services, functionality and the creation of KMS model covered in the chapter. The resources used in the chapter include: theses, research journals, reports, conference proceedings etc.

Chapter 4: An Introduction to Social Sciences

As a part of the research topic, this chapter gives an overview of Social Sciences, followed by the concept, definitions from different sources, detailed historical development of the subject, and the role of Social Sciences in modern day society. Besides that, an assortment of branches of the Social Sciences is highlighted, from which the concept, development, and importance of the modern day society of some of the prominent fields are discussed. This chapter puts a concrete base for the study by describing all the important aspects of the field under study. As Faculty of
Social Sciences of Aligarh Muslim University is the focus for the development of the KMS model, this chapter also gives a brief description of the same.

**Chapter 5: Design and Development of a KMS Model**

This chapter is totally devoted to system designing; it deals with the creation of a model of KMS for Social Sciences. This chapter covers all different aspects of KMS from theoretical approach for development of a model practically. This chapter provides the step by step processes and technical procedures used to create Knowledge Management System model, while emphasizing the detailed work processes of all the components of the system including their respective functionality, Organization, Browsing and Searching facilities, Self-archiving etc.

**Chapter 6: Evaluation of Model of KMS in Social Sciences**

The model of KMS developed is lastly put for use before three different categories of users in order to collect their feedback and analyze the same. The evaluation is carried out in two phases/parts; one is to know the general awareness of users regarding the KM/Knowledge Management Systems, second phase/part covers the use of developed model, its flow and efficiency in terms of the discussed features and set parameters, followed by Data Analysis, Interpretation and Discussion.

**Chapter 7: Major Findings, Discussion, Recommendations, and Conclusion**

This chapter sums up the whole study, giving major findings, discussion, recommendations and conclusion.
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Albert, J. (2000). Is knowledge management really the future for information professionals (pp.63-76)?. In Srikantaiah, K. & Koenig, M.E.D. (Eds), Knowledge Management for the Information Professional, Information Today, Medford, NJ.


