



## Applications of Knowledge Management in Social Networking

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**Abstract**— *Social networking has become one of the most powerful sources of knowledge sharing factor. The sharing is done among all users irrespective of their domains. Managing domains of different formats are analyzed in this paper. The application of knowledge management tools in the social networking arena is further studied. Social network has gained remarkable attention in the last decade. Accessing social network sites such as Twitter, Face book LinkedIn and Google+ through the internet and the web 2.0 technologies has become more affordable. People are becoming more interested in and relying on social network for information, news and opinion of other users on diverse subject matters. The main idea in driving KM is that knowledge must be managed like an asset. This involves creating, codifying and sharing knowledge. Social networking has become one of the most powerful sources of knowledge sharing factor. The sharing is done among all users irrespective of their domains. Managing domains of different formats are analysed in this paper. The application of knowledge management tools in the social networking arena is further studied and analysed through normative methods. The futuristic study may further be concentrated on the originality of the acquired knowledge.*

**Keywords**— *Social networking, Knowledge Management, SNA, Knowledge sharing.*

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### I. INTRODUCTION

The usage of internet has flourished drastically due to the large users of web based technologies. The usage of these technologies has become mandatory in a day-to-day human life cycle. Most of these technologies help us to learn, modify, share and perform basic business manipulations. As per DIKW paradigm, knowledge should be generated or created based on authentic sources. Users share their content as part of two types of groups which are categorized as known and unknown. Most of the sharing among users are done based on the concept of trustiness. This paper is planned as i. To analyze the web based knowledge sharing patterns through Social networking and ii. Implication of knowledge Management tools to the Social Networking process as part of study with certain limitations.

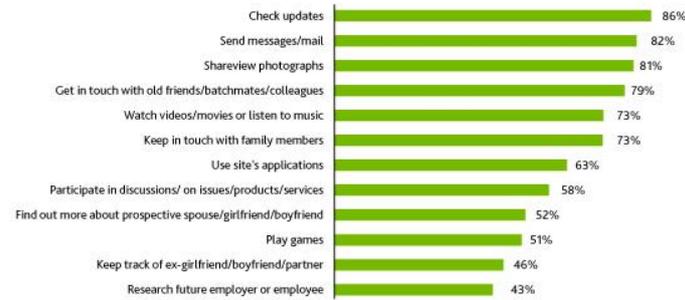
### II. SOCIAL NETWORKING

Social Networking is also referred as a virtual community. A social network is a website on the Internet that brings people together in a central location to talk, share ideas and interests, or make new friends. A social network site will usually provide various ways for users to interact, such as IM (chat/ instant messaging), email, video sharing, file sharing, blogging, discussion groups, etc. This type of collaboration and sharing of data is often referred to as social media. The main types of social networking sites have a 'theme' that contain libraries/ directories of some categories, such as former classmates, old work colleagues, and so on (like Face book, friends reunited, Linked in, etc). Social networks are formed between Web pages by hyper linking to other Web pages. The 5 main characteristics of social networking are classified based on Ryan Dutu 2007, Research of Rice University: 1. User Based – these users submit and organize information-content determination- provides free transfer or acts as unstructured 2. Interactive – collection of collective chat rooms – users can play games – gets connected and have fun 3. Community Driven –possess common interest - creating new friends with commonality -reunion 4. Relationship – identifying no. of relationships between members and non members - possess no control on settings –data transfer gets slowed 5. Emotional control deals with web content with information today and their exchange mode of representation. There are Two Major Tasks that are done using social networking: Social Network Extraction from the Web and the Social Network Analysis.

In general, the users of social networking are further categorized like alpha socialism, attender section, follower, faithful and functional (wrt. 2007/ofcom SNR). The functionality of Social networking are identified as Presence - Extent to know if others are available - Sharing –Extent to users exchange ,distribute &receive content - Identity- Extent users reveal themselves - Relation-Extent users relate to each others - Group -Extent which user communicate with each others - Extent to which users are - Regulate- Extent to which users social study of others. According to Suraya et al. [9], there are four normal activities that are applied in the process of learning (refer Figure 3):i) Creation of content information: Students could generate ideas and their work assignment to public. In addition, those activities allow students to develop their contents and share them with their learning community. ii) Sharing of information: This activity

enables to enhance as well as widens the contents that being learned. iii) Interactions: The interactive process involves interactions amongst students that would lead to active discussion. iv) Social partnership: This activity involves cooperation to resolve a particular issue through social network Students could interact among themselves through active social cooperation the activities performed on social networking websites & the increase in users of social networking are graphically displayed below.

Activities performed on social networking websites



Source: The Nielsen Company, AbsolutData

nielsen

### Social Network Users and Penetration in India, 2010-2014

	2010	2011	2012	2013	2014
<b>Social network users (millions)</b>	<b>33.1</b>	<b>50.2</b>	<b>76.1</b>	<b>105.0</b>	<b>129.3</b>
—% change	38.8%	51.5%	51.7%	37.9%	23.2%
—% of internet users	52.3%	60.3%	71.0%	78.9%	83.0%
—% of population	2.8%	4.2%	6.3%	8.6%	10.5%

Note: internet users who use a social network site via any device at least once per month

Source: eMarketer, Aug 2012

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www.eMarketer.com

### III. KNOWLEDGE MANAGEMENT

All Knowledge Management is a strategy, framework or system designed to help organizations and individuals to create, capture, analyze, apply, and reuse knowledge to achieve competitive advantage. It is truly a practice, which involves people, process and technology. If it is implemented correctly in collaboration with users and management, plus clearly defined goals can bring productivity and efficiency to an organization. From the management side it is more of a strategic process and from the users side it is an ongoing operational process. Efficient flow of information is essential for quick and effective decision-making. The philosophy behind Knowledge Management is to structure the flow of information throughout an organization, so that the learning of one person within the organization is passed on to others, and is available to the organization even after the person has left the company. Knowledge Management also involves consolidating data and presenting it in a way that is manageable and comprehensible, so that it can make sense and trends can be spotted early.

Knowledge Management is not a technology or set of methodologies rather it's a discipline, which deals with people and process component, which are overlooked, in knowledge management programs. Many knowledge initiatives are started at the grass-roots level with the expectation that people will automatically create and use knowledge. But one has to be clear that the failure of any one of the pillars among people process and technology will lead to failure of knowledge management

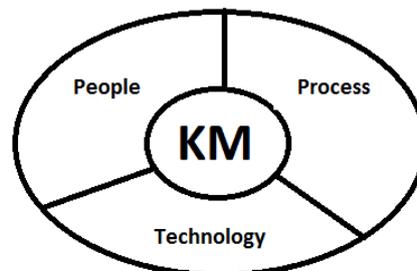


Figure: Components of Knowledge Management

### IV. KNOWLEDGE MANAGEMENT - LIFE CYCLE

Knowledge in business can be seen to have a lifecycle of its own.

- It must be created either within or outside the organization. This is typically comprised of iterative tacit and explicit loops until the knowledge is ready for distribution to those outside the creating group.

- It can then be stored somewhere, either tacitly or explicitly so that it is accessible for others to find and use.
- Those who need the specific knowledge must then find out where it is, when they need it, by searching in the right places and / or asking the right people.
- Once the knowledge source is found, the user will then go through the act of actually acquiring it. This will involve gaining personal knowledge from other humans or documented sources.
- Once acquired, the knowledge can be put to use towards some productive purpose.
- Having been used, perhaps repeatedly, the user will learn what worked well and not so well as a result of applying the knowledge gained. This can then be taken as significant input into further iterations of the knowledge creation and distribution process.

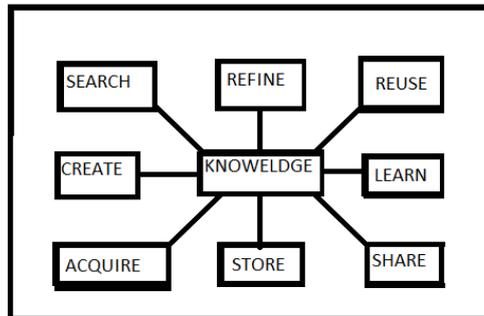


Figure: Knowledge Management Life Cycle

A key contributor to the effective management of this cycle is the concept of learning. Without the learning component, the cycle is devoid of knowledge. It merely, becomes an information delivery strategy, which becomes disconnected from the leverage of more effective human experience. The application of the delivered knowledge to operating the business (Find, Acquire and Use) will have some initial value but the delivered knowledge will be immediately out of date unless continuously renewed with the latest lessons learned from the application of the delivered knowledge (Learn, Create and Store).

Knowledge Management is the management of this cycle for optimal performance across all aspects of the Knowledge six pack. KM involves the basic processes of creating, storing and retrieving, transferring and applying knowledge. The ultimate aim of KM is to avoid reinventing the wheel and leverage cumulative organizational knowledge for more informed decision-making (Alavi and Leidner 2001). Examples of ways in which knowledge can be leveraged include: transfer of best practices from one part of an organization to another part, codification of individual employee knowledge to protect against employee turnover, and bringing together knowledge from different sources to work on a specific project. Information technology (IT) is recognized as a key enabler of KM (although there are many other factors that are necessary for KM success). Without the capabilities of IT in terms of both storage and communication, leveraging of knowledge resources would hardly be feasible (Alavi and Leidner 2001). A variety of tools are available to organizations to facilitate the leveraging of knowledge. These tools (KMS) are defined as a class of information systems applied to managing organizational knowledge. That is, they are IT-based systems developed to support and enhance the organizational processes of knowledge creation, storage/retrieval, transfer, and application (Alavi & Leidner 2001). Common KMS technologies include intranets and extranets, search and retrieval tools, content management and collaboration tools, data warehousing and mining tools, and groupware and artificial intelligence tools like expert systems and knowledge based systems. Two models of KMS have been identified in information systems research (Alavi & Leidner 1999) both of which may be employed by organizations to fulfill different needs. These two models correspond to two different approaches to KM i.e., the codification approach and the personalization approach<sup>1</sup> (Hansen, Nohria, & Tierney 1999). The *repository* model of KMS associated with the *codification* approach focuses on the codification and storage of knowledge in knowledge bases. The purpose is to facilitate knowledge reuse by providing access to codified expertise. Electronic knowledge repositories (EKR) to code and share best practices exemplify this strategy (Alavi & Leidner 2001). A related term, organizational memory information system (OMIS) refers to any system that functions to provide a means by which knowledge from the past is brought to bear on the present in order to increase levels of effectiveness for the organization (Stein & Zwass 1995).

## V. SOCIO-KNOWLEDGE SHARING ANALYSIS

The Research study was done based on Delphi technique process. Hence, a Questionnaire was generated and circulated to study the knowledge sharing patterns. The main objective for generating a Questionnaire was to understand the use of Internet and Social Networking by the learners to acquire knowledge with respect to the age factors from 0-35.

The Questionnaire had three phases. The expected observations of the circulated questionnaire are:

### Phase – I – Personal / Background Information

(Learner's background information was required as part of study to understand the utilization and application of technology tools)

1. Environment of the student / learner through attributes of city, parents education, occupation and their state.
2. Frequent usage of internet – to find out the source of usage.
3. Study of knowledge acquisition patterns through search engines

**Phase --II – Learning Orientation**

(Learner’s environment and their habitual method for learning and knowledge generation is studied and analysed)

1. Learning objective
2. source of learning
3. Initiation for learning
4. Time spent for learning / Updating
5. Frequent source of knowledge updating
6. Content selection
7. Criteria for filtering learning content
8. Usage of E-learning S/W
9. Social networking frequently used
10. Number of S/W registration
11. Reason for having S/N account :
  - a) Sharing
  - b) To be touched with friends
  - c) Entertainment
12. Plat-form for sharing:
  - a) E-mail

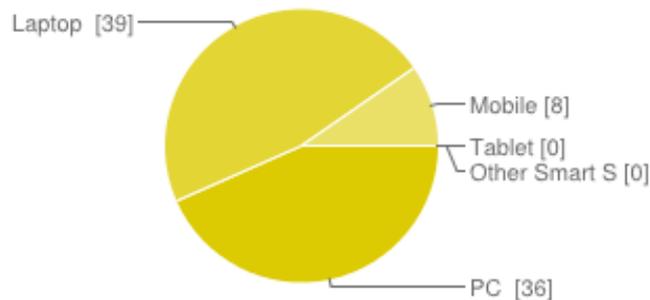
**Phase – III – Trust & Originality of Knowledge Sharing**

(Learner’s originality analysis before studying and sharing after learning is analyzed.)

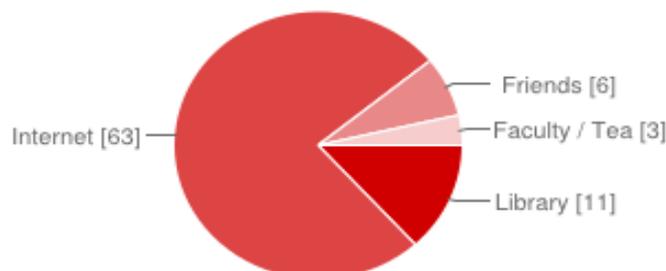
- 1) Initiation of Learning process
- 2) Filtering unwanted content
- 3) Checking originality of content
- 4) Frequently & sharing content
- 5) Check originality before sharing
- 6) Suggestion for checking originality of the content:
  - a) Check authentication of the Publisher
  - b) Page run calculation
  - c) Discuss with friends & experts
  - d) Search books/reference material
  - e) Checking digital signature
- 8) Checking validity of knowledge :
  - a) Interacting teachers
  - b) Self- analysis
  - c) Cross- checking with experts
- 9) Initiative taken protect the originality of the content
- 10) Number of times (3 rd party content) & Integrative of content

The three main outcomes of selected questions are graphically displayed

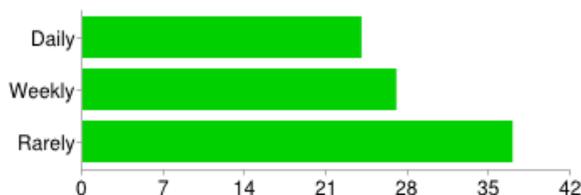
**Q1. Source of Using Internet**



**Q2. Sources to Learn Today**



**Q3. Metrics of sharing knowledge**



Further, the study imposes on the creation, sharing, collaborating, and communicating things from one person to another. The tools implied are Google drive for creation, Google+ for sharing the questionnaire and other online analytical tools for processing the information. However, the questionnaire is currently under flow. The questionnaire study is followed by the interviews among the leading knowledge generators like academicians, knowledge based business partners and a few researchers.

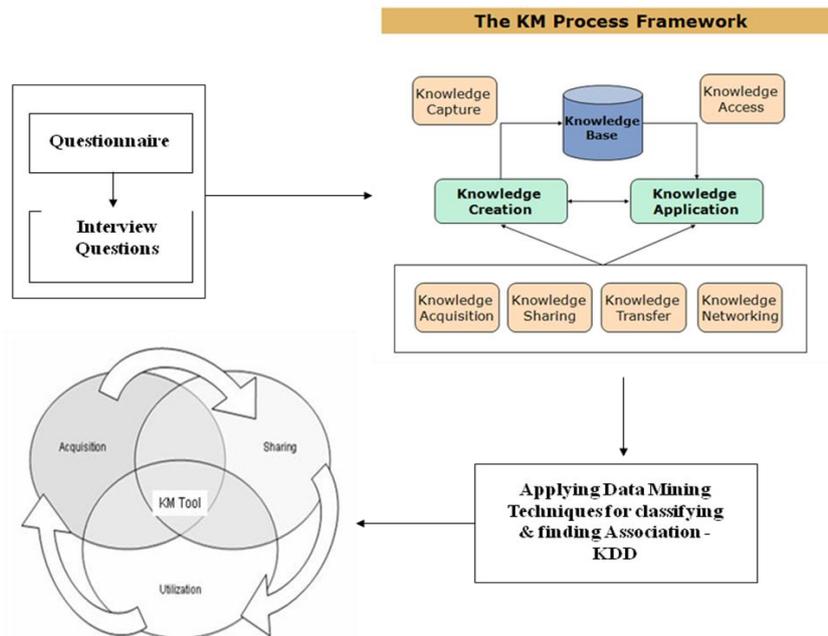


Figure1. Proposed Model for Knowledge Acquisition

Figure1 proposes the model for Knowledge Acquisition. We have implied Application of Data Mining Algorithms to classify and find out the association among web blogs to find out the originality, trustiness and sharing modality. Later Implementing Knowledge Management Model for compilation of knowledge into a complete Framework – the Construction of Knowledge Management Framework. I have used other statistical software package for analysing data from Questionnaires and Interview schedule.

**VI. IMPLICATIONS OF THE STUDY**

The study has the following implications which are highly useful not only for the learners and future researchers as well. The derived framework would help the digital learners to acquire valid knowledge acquisition patterns through Data mining tools. This study would also help the learners to analyse the originality, trustfulness and the sharing patterns of any content through knowledge management. Even though numerous social networks are available for the learners usage in India, the researcher has selected only a few social networks for the study such as blogs, face books and LinkedIn. The samples identified for the research are the learners who are addicted to the usage of Information and Communication Technology. The data collected and taken for the further works are obtained only from Indian students excluding Foreign students

**VII. CONCLUSIONS**

Social network has gained remarkable attention in the last decade. Accessing social network sites such as Twitter, Facebook LinkedIn and Google+ through the internet and the web 2.0 technologies has become more affordable. People are becoming more interested in and relying on social network for information, news and opinion of other users on diverse subject matters. The main idea in driving KM is that knowledge must be managed like an asset. This involves creating, codifying and sharing knowledge. Social networking has become one of the most powerful sources of knowledge sharing factor. The sharing is done among all users irrespective of their domains. Managing domains of different formats are analysed in this paper. The application of knowledge management tools in the social networking arena is further studied and analysed through normative methods. The futuristic study may further be concentrated on the originality of the acquired knowledge.

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