CHAPTER 2

A LITERATURE REVIEW OF TACIT KNOWLEDGE SHARING AND TRANSFERRING IN HIGHER EDUCATION

2.1 INTRODUCTION

This chapter attempts to highlight the scores of works on the various existing knowledge management approaches in higher education. In particular, this chapter starts with discussions on the definition of knowledge, types of knowledge, survey on knowledge management in higher education and also sharing and transferring of knowledge in higher education. It continues with discussions on the knowledge sharing process model, based on the information and communication technology.

2.2 DEFINITION OF KNOWLEDGE

Knowledge is defined in various ways by different authors. One of them is given by Davenport and Prusak (1998) as “knowledge is a fluid mix of framed experience, values, contextual information, and expert insight that provides a framework for evaluating and incorporating new experiences and information. It originates and is applied in the minds of the knower. In organizations, it often becomes embedded not only in documents or repositories but also in organisational routines, processes, practices, and norms”.
2.3 TYPES OF KNOWLEDGE

There are two types of knowledge, which are widely discussed in the knowledge management approach. Explicit knowledge is a formal type of knowledge which is stored, articulated and disseminated into certain codified forms such as databases, libraries (Nonaka 1994), manuals and computer files (Becerra and Sabherwal 2001; Choi and Lee 2003; Akgun et al 2005). Tacit knowledge is defined as knowledge that is highly personal and embedded in an individual’s daily life or work practice (Nonaka 1994). According to Barth (2002) knowledge can be acquired through practical application and work practices, and it can be transferred and demonstrated through observation. Haldnin (2000) states that tacit knowledge can neither given in lectures nor found in databases, textbooks, manuals or internal newsletters, for dissemination.

Mooradian (2005) states that a process is needed to convert tacit knowledge into explicit knowledge; this has been suggested by Nonaka and Takeuchi. Klein (2008) claimed that subjective insights and tacit knowledge are hard to be passed, communicated or shared among the individuals. Tsoukas (1996) states that the separation of tacit knowledge and explicit knowledge is impractical. Jasimuddin et al (2005) also state that tacit knowledge and explicit knowledge are inseparable.

2.4 SURVEY ON KNOWLEDGE MANAGEMENT IN HIGHER EDUCATION

Jillinda et al (2000), in their paper outline the application of the corporate sector which is developed, based on knowledge management concepts. Various trends are considered, and how the knowledge management approaches can be incorporated in the higher education, is explored.
The knowledge management approach in higher education leads to the improvement of academic and administrative services, at the lowest cost. The authors compare the types of knowledge, namely, explicit and tacit knowledge which gives a comparative study for the better understanding of the user. It also explains the difference between knowledge management and e-Business. There are significant opportunities in the colleges and universities to apply knowledge management practices to support every part of their mission, from education to public service to research. The authors also listed the additional application and benefits of knowledge management for the research process, curriculum development process, student and alumni services, administrative services and strategic planning.

Jennifer (2000), suggests that there is a significant level of knowledge management activities practiced in the universities. It is important to recognize, and use them as foundations for further development, rather than to invent a whole new paradigm. A series of unrelated knowledge based activities is not sufficient. Universities and their faculty should recognize and responding to their changing role in a knowledge-based society. Essentially, universities need to consciously and explicitly manage the processes associated with the creation of their knowledge assets. The intellectual capital values are to be recognized for their continuous role in the society and in the global marketplace for higher education.

The author further suggests that knowledge based organisations might seem to have the most to gain through knowledge management; effective knowledge management may require a significant change in culture and values, organisational structures and reward systems. The management of the relationship between knowledge and power is crucial. Finally, knowledge management for higher education in a global economy requires strategic
alliances in the international arena, and the creation of global knowledge repositories, which are used for a competitive advantage of the partner in the alliance.

Rachelle et al (2004), suggest that the concept of knowledge management has been around for decades, but most organisations accept it only as theory and have not put it into practice. It has been difficult for many organisations to evolve their organisational thinking from an information focus to a knowledge focus. Knowledge, in this context, is information that is further refined to connect, compare, evaluate and act on information. It also involves the experience and judgment of the individuals within the higher education organisation. The question is: ‘How can the faculty and administrators in higher education are motivated to share the knowledge gained from their experience?’ The typical culture in colleges and universities is not one that rewards the sharing of ideas and wisdom.

Promotion and job security are the functions of a faculty member's ability to generate original ideas, and apply them in unique ways. In such a case, knowledge can be thought of as a belief, which is justified and then internalized. Therefore, it can be lost, shared, or hoarded. Faculty members fear the theft of their research ideas. Advances in technology make shared research ideas vulnerable to capture and unethical reproduction. When job security depends on the demonstration of originality and vision, there is little or no incentive for those with knowledge insights to share with those who are struggling. The authors, having gained an insight into the study of knowledge management, hope to extend this survey by proposing a reward structure in colleges and universities. It would make knowledge sharing an enhancement of promotion policies and job security.
Mamta (2005), suggests that Universities have traditionally had two main roles: creating knowledge, and disseminating knowledge. Research has been the main vehicle for creating knowledge and teaching has been the main vehicle for disseminating knowledge. In today’s rapidly-changing economic environment, the traditional role of universities as providers of knowledge is greatly challenged. KM can create an innovative relationship and link between work and education, help students to more closely match their talents with the current workplace demands, contribute to the adaptation and assimilation of new knowledge with the existing one, contribute to the re-connection of learning with experience, so that a curriculum reflects the “real time, real place and real problems”; work can no longer be seen as something that happens at a later stage in life.

The author also suggests that a learning organisation, based on KM principles, facilitates the learning of all its members (students and researchers) and continuously transforms it. Due to its specific features, a learning organisation is in the position to develop students who are inquisitive, have excellent thought processes, open to new ideas and have self-motivated creativity and extraordinary thinking capacity. The author suggests how learning can be assessed and controlled, and gives appropriate ways to monitor the increases and decreases in the knowledge assets embedded in the organisation as part of future research.

Murali Raman et al (2005), suggest that wiki is a group collaboration software tool based on the web server technology. This paper examines the use of a wiki to facilitate knowledge management in an academic setting. The authors’ findings suggest that wikis can support collaborative knowledge creation and sharing in an academic environment. Success in attempts to provide such support may depend on: familiarity with
wiki technology, careful planning for implementation and use, appropriate class size, and motivation of students to engage in discovery learning.

Lugkana et al. (2006) suggest that developing a generic knowledge management framework specifically adapted for higher education. Many academic institutions have been involved in the development and use of computer supported cooperative work systems or e-learning systems. However, the sudden increase of available teaching and learning material at the campus has raised other type of requirements. Those are related to the methods and technologies on how to acquire, store, organize, disseminate, search, index and retrieve efficiently and successfully the available knowledge. Another identified challenge is how to make sure that the end-user will use effectively the systems in their daily routines.

A framework mapping the existing initiatives or systems with knowledge management processes has been delineated. The author presents an innovative knowledge management for higher education. The empirical investigation aimed at understanding how the knowledge management was perceived and encouraged by the academic stakeholder. In this article, there is no discussion about the involvement of new knowledge management systems for future needs. Only the existing systems are involved and there is no discussion about sharing of the knowledge between the universities.

Bahar Baran (2006), in his paper examines the relationship among three important topics: teachers’ professional development, knowledge management and online communities of practice. All over the world establishing settings for communities of practice has become an important focus within teachers’ professional development projects, and it seems to be an effective solution to provide lifelong learning opportunities for teachers. A community of practice can provide both implicit and explicit knowledge
sharing opportunities among teachers. In this vein, teachers can produce useful documentation, tools, and procedures and share these documents with other novel teachers.

With developing information technologies, online environments allow users to communicate in an interactive environment, synchronously or asynchronously. Therefore, online environments have been popular knowledge management places with portals including interactivity. The author also suggests that since establishing a community is not as easy as the blinking of an eye, it requires patience and a variety of strategies to be used in different times. In sum, Communities of Practice need more research and in the following years, one may learn more about them. The author focused only on teacher’s education, and there are no points about the student’s and administrative person’s participation in knowledge management.

Mário et al (2006), aim to reveal the importance of benchmarking for universities, through its contribution both to carry out more effective evaluations and to detect organisational problems that should be subsequently improved and surpassed, and also aim at developing a framework about e-governance systems in order to propose some benchmarks that can be implemented by the universities. This paper aims to provide a benchmarking proposal related to the area of e-governance of universities. An e-governance tool is proposed in order to combine both the mission and the institutional culture of each University into a formal scheme of benchmarking tools.

These benchmarking tools help the universities to identify both their strengths and weaknesses at an internal level, and also to face threats and avail the opportunities at the external level. The example of benchmark that is included in the present article belongs to the area e-governance of the
University for Sustainability. It considers the participation of the university in the creation of e-governance systems. This area assumes a great importance since the long term institutional development strategy should be based on processes that aim to reach the sustainability. These benchmarking tools help the university to identify both their strengths and weaknesses at an internal level, and to face threats and avail opportunities at the external level in order to improve the global quality of services and the efficiency. This will contribute to the improvement of the global performance of the institution, through the adoption of the best practices. This benchmark selects only the best among the existing systems.

Giesbers et al (2007), suggest a new modeling technology to increase the knowledge of the teachers and learners. Educational modeling refers to the modeling of educational systems or sub-systems, such as instructional design or assessment. Such a model is a framework that contains important concepts, processes and relations. Educational modeling can be seen as the building of ontology – an interrelated collection of entities and their relationships.

The current practice in educational modelling combines’ knowledge elicitation techniques with UML modeling, and is performed more or less depending upon the context in which the modeling takes place. This does not automatically lead to efficient modeling. A set of guidelines that structure the modeling process will greatly enhance the modeling. It was assumed that experts could read basic UML models, that they could translate their knowledge to the UML models, and tests the presented models on their knowledge. The model for assessment that was ultimately produced by the project was welcomed in a positive way by several independent reviewers and experts in assessment.
Miguel et al (2007) suggest that the information gathered is one of the more important organisational resources. The institutions that was able to organize and take advantage of their own operations concerning information such as gathering, processing, and dissemination systems are more able to evolve their own strategy. Creating an information system that fulfils the organisational information needs must take into consideration a setting that supports competitive intelligence. The system must provide a growing awareness of the actions that promote better results and help the organisation to choose the best strategies and innovative processes.

The Competitive Intelligence (CI) is defined as a systematic process of information gathering, processing, analysis and decomposition. The process is conducted within the context of the external environment of the organisation activities, with the major goal of supplying the right information, at the right moment, in the correct structure, to the right person, in order to support the best decision possible. The authors believe that the system can only have success if a number of requirements are met. Such requirements are considered critical success factors as they need to be fulfilled in order to achieve the initial goals of the project. As a result, a number of critical success factors were identified. The authors conclude that the institution that can put into practice a CI system in its organisation and can get a more closed and friendly community, more informed and with a strong sense of the skills that may enhance its own success.

Andrew (2007) suggests that aspects such as human capital, structural capital and customer capital are important variables of the whole intellectual capital management programme, which forms part of the knowledge management initiatives of institutes of higher learning. The skills and expertise of university staff as part of its human capital are discussed.
Structural capital will encompass aspects, such as the role of innovation and intellectual property rights. Customer capital of the university and the knowledge of stakeholders in the field of tertiary education are becoming more important. Bringing intellectual capital, knowledge management and enabling technologies together, is an exciting challenge to leaders to create an information age in the institution.

It may be said that intellectual capital deals with auricular, reasonable, knowledgeable and substantial fruits of the mind. It claims intangible (tacit) and tangible (explicit) dimensions, which do not mutually exclude, but actually complement each other. The conversion of knowledge into a valuable asset has come to be known as an intellectual asset or intellectual capital. The management of intellectual capital by institutions of higher learning is becoming more important day by day. In the study on existing intellectual capital management and measurement frameworks, it has become clear that specific models are needed to be developed for these institutions. As a result, a framework was developed which was used to manage and measure intellectual capital at institutions of higher education.

Yousef and Azam (2008) suggest that weblogs are one of the popular technologies that have been developed in these years. Using weblog in higher education will also change the roles of the teacher, and in these environments teachers no longer represent texts and materials, but they have to guide students in this environment and help them to do their work themselves. Weblogs can be used by professors to follow the students’ learning process, and can be used by the students themselves. One possibility is the use of weblog as a learning journal, where students reflect about what they are learning, what they are reading, what they are working on with colleagues, etc. Students can share this space and learn from each other, and
this tool lets professors know how they are doing, what are the problems of the students, where they have difficulty to understand, what the learning rhythm of the class is, etc.

Students in higher education are not dependent on the classroom; they have to work by themselves and with their classmates cooperatively, but in the conventional classroom doing this is very hard, but in the new age and by using new technologies such as weblog, doing this is easy and everybody could do it. Weblogs could play a major role in university students’ learning, by providing them the opportunity to engage with course materials and supplementary materials. Weblogs offer a significant potential benefit to learners, by accelerating the learning processes, and by providing the opportunity to work and act as a group out of the conventional classroom.

Ferenc and Ágnes (2009), suggests that the main goal of knowledge management is to raise the value of the organisation with the application of the existing knowledge and intellectual capital within the organisation. One basic assumption of knowledge management is that the enhancement of the knowledge base can support the organisation in achieving a better position in competition. The authors examine the knowledge transfer between the higher education institutions (as knowledge intensive service providers) and the students (as clients). Students represent such networks, the elements of which are capable of knowledge sharing and knowledge distribution among themselves.

To be able to investigate the knowledge processes in higher education institutions, the authors suggest that one should have a look at the determining success factors of the knowledge processes, first. Considering the discussion on knowledge processes in universities, the authors have found that the characteristics of the organisations should be considered. For this, the
authors find it appropriate to view those features of universities, producing and delivering service to the public, which can have an impact on the successful implementation of knowledge management programs.

Gholamreza et al (2009) in their article suggest a categorisation system for knowledge management practices in higher education, based on two dimensions: the practices’ role in the problem-solving process, and the type of problem they address. The two most widespread types of categorisation systems for knowledge management practices are grounded in organisational strategy and the characteristics of knowledge, respectively. By developing an understanding of the changes occurring in the organisation’s environment, employees improve their knowledge; this is commonly thought of as learning. Organisations that operate in rapidly evolving environments, therefore, stand to benefit most from learning, and suffer most from a lack thereof.

The authors suggest the following knowledge management practice descriptions: formal training, knowledge repositories, knowledge fairs, communities of practice, and talk rooms. In this article, the authors first discuss the existing frameworks for categorizing knowledge management practices, based on organisational strategy and knowledge characteristics to explain why a problem-solving approach is likely to have value. They describe the underlying theoretical constructs and integrate them into the research framework and conclude with a summary of the outcomes, limitations and contributions of this research, towards a new way of understanding knowledge management practices.

Walter et al (2010), suggests that effective KM is an increasingly important source of competitive advantage, and a key to the success of contemporary organisations, bolstering the collective expertise of its
employees and partners. The application and use of ICT to support KM in higher education is currently an emerging challenge, and requires a new conceptual approach and research agenda to address new challenges. To be able to effectively manage their knowledge resources, higher education institutions need to have an appropriate KM framework in place.

The authors propose a conceptual framework for using ICT to enhance KM in higher education and identify a research agenda to bridge the requirements of theory building and testing, to address the different emerging challenges. To succeed in KM, it is important that the assessment and defining of ICT capabilities are done properly, as they support and facilitate KM processes such as knowledge capture, storage, retrieval, sharing and collaboration, dissemination, and updates in organisations and in higher education. The authors in this paper, conceptualise an organisation in the proposed framework as a knowledge space, where the required ICTs and agents, individuals and collectives who use them in the conduct of their knowledge work, are embedded.

More (2010), suggests that knowledge is a fluid mix of framed experience, values, contextual information and expert insight that provides a framework for evaluating and incorporating new experience and information. It originates from and is applied in the minds of knower. In organisations, it often becomes embedded not only in documents or repositories, but also in organisational processes, practices and norms. Knowledge management is a new field, and experiments are just beginning in higher education. The author believes that there is tremendous value to higher education institutions that develop initiatives to share knowledge to achieve business objectives. Colleges and universities have significant opportunities to apply knowledge management practices to support every part of their mission; KM in education
is a strategy to enable people to develop a set of practices to create, capture, share and use knowledge to advance.

Corporate portals allow users to customize their desktops to show information from a variety of sources within the organisation. Knowledge management has been about breaking down barriers within the organisation, and e-business has been about breaking down barriers between the organisation and its customers. With the progress in the use of electronic based methods, this teaching cum training has become easier. A few techniques can be utilized to make learning more participative, goal-oriented, interesting and driving towards making an innovative bent of mind. Education’s basic underlying purpose is to make people aware of concepts, skills and competencies. When the KM strategy is properly applied it helps in enhancing the in-built competitiveness and transforming budding managers into effective leaders.

Rebecca (2011), suggests that sustainability in higher education (SHE) is a fast growing topic that has sprouted at campuses around the world in recent years. Universities and colleges are inspired for a number of reasons to strive for a more sustainable campus, from altruistic goals set by keen campus leaders, to implementing greater efficiency for fiscal purposes, to simply cashing in on the popularity of the term “SHE”. Institutions of higher education are unique in the vast amounts of knowledge they accumulate through staff, faculty, administration, and the student body. From purchasing to housing, accounting to academics, and a plethora of different positions in between, the sharing of knowledge throughout each unique aspect of campus life could help to transfer our academic institutions into leaders of sustainable development.
There is growing recognition of the complexity of environmental management, and in some cases, practitioners are learning to burst out of their silos and draw from other areas of expertise. Perhaps one of the most obvious places to start would be from management, particularly the management of knowledge. Convincing staff and faculty to attend the sessions, complete the follow-up work required, and continually provide input on a project may be difficult, and present itself as a major roadblock for applying KM to SHE. As with most things, it is hard to implement any project or management system without integrating one’s own biases, and KM is no exception. To stay true to the integrity of the framework, SHE managers may have to identify and shelve their own conceptions or perceived understanding of the barriers to achieving campus sustainability, and be open to an honest dialogue.

Jasmina (2011), suggests that the introduction of knowledge management in higher education is inevitable, due to the current social and economic changes in the knowledge economy; research of its presence in higher education institutions is important, not only for establishing its current state or for following the progress of its implementation, but also for establishing the strong and weak points, predispositions and obstacles of HEIs for its implementation. The methodology presented in this paper is based on a KM framework, which equally addresses KM processes and KM culture. There are plenty of theories on KM processes in the literature, but the one which unites all of them is taken as the basis of this methodology.

In addition, examining these processes will also involve examining the technological aspects, since this KM framework includes the process of storing and organisation of knowledge, and at the same time analyzes if these processes are in progress, and if organisations are using an adequate technology. The methodology was designed to provide several advantages. It
begins with the inseparability of the organisational aspects of KM in educational institutions, and the application of KM in the educational process, so it examines both KM levels, as opposed to other similar studies. Furthermore, it encompasses the perspectives of two most important groups within HEIs, the teachers and the students, and thus provides a clearer picture, which is not affected by a subjective point of view of a specific and consistent group of respondents.

2.5 LITERATURE GAP ON EXTRACTION OF TACIT KNOWLEDGE

Haridimos (2002), suggests that the idea of focusing on a set of tacitly known particulars and “converting” them into explicit knowledge, is unsustainable. The significance of “tacit knowledge” for the functioning of organisations has not escaped the attention of the management theorists. By and large, tacit knowledge has been conceived in opposition to explicit knowledge, whereas it is simply its other side. As a result of such a misunderstanding, the nature of organisational knowledge and its relation to individual skills and social contexts has been inadequately understood.

Tacit knowledge forms a triangle, at the three corners of which are the subsidiary particulars, the focal target, and the knower who links the two. It should be clear from the above that the linking of the particulars to the focal target does not happen automatically, but is a result of the act of the knower. The structure of tacit knowing has three aspects: the functional, the phenomenal and the semantic. The functional aspect consists in the ‘from-to’ relation of particulars (or subsidiaries) to the focal target. Tacit knowing is a ‘from-to knowing’; one knows the particulars by relying on our awareness of them for attending to something else. Tacit knowledge has been greatly
misunderstood in management studies. Tacit knowledge cannot be “captured”, “translated”, or “converted” but only displayed, manifested.

Paul et al (2003), suggests that encapsulating explicit knowledge within large scale organisations is well understood and several commercial off the shelf applications exist that enable the implementation of efficient knowledge base management systems. This provides the organisation with added value and enables knowledge components to be re-used and freely transferred throughout the organisational enterprise; however, a large amount of implicit knowledge is directly unobtainable and often lost when employees leave the organisation. This is known as tacit knowledge and is generally deep routed within the employee’s memory, and communicated through face-to-face human interactions.

Tacit knowledge is inherently communicated via face-to-face interactions. Merging the social with the technical allows us to develop knowledge extraction algorithms that attempt to gain a conceptual understanding of these interactions in order to extract tacit knowledge and codify it in a knowledge management system. The challenge must be to devise indirect mechanisms to extract and represent tacit knowledge using distributed peer-to-peer networks, further enhancing the intellectual capital within the organisation. This paper describes the socio-technical requirements paramount to capturing tacit knowledge, using peer-to-peer enabled technologies. The authors describe the conceptual query (ConQue) algorithm and the knowledge source extraction (KeSEn) algorithm, and illustrate the functionality of the working model.

Stephen (2003), suggest that the current quality assurance culture demands the explicit articulation, by means of publication, of what have been hitherto tacit norms and conventions underlying disciplinary genres. The
justification is that publication aids student performance and guarantees transparency and accountability. This requirement makes a number of questionable assumptions predicated upon what one will argue is an erroneous epistemology. An emphasis on publication also ignores the transformative nature of learning. In higher education, the process through which this is achieved is by means of a gradual, and largely tacit, acculturation or initiation of a student into a discipline.

The information supposedly contained in published maxims is not available to those as yet uninitiated into the relevant practices. Acculturation is an active process that necessarily begins with a submission to authority; mainly because the neophyte is not able to judge the appropriateness or inappropriateness of behaviors within practices, until he/she has become able to see its coherence. It is a process that, therefore, requires a degree of trust from the student and consists in participation in anticipation of understanding. It is not always possible to articulate in a publishable form a detailed description of disciplinary practices, such as assessment. As a result, publication cannot achieve its stated goals. There are always elements of our knowledge that cannot be linguistically articulated.

Ben (2005) aims to provide a brief enquiry into the nature of implicit knowledge and what is implicit knowledge as well as some of the aspects of the extraction of implicit knowledge. It describes some of the difficulties in extracting implicit knowledge, and indeed, provides a brief non-exhaustive survey of some methods currently used in the extraction of implicit knowledge.

Tacit knowledge (or embodied knowledge) is a prime characteristic of an expert who can act, work and make judgments without having to directly reference the declarative knowledge behind the decisions. Experts
work without any explicit theory as to why they work in that particular way; they just perform skillfully without any serious deliberation or hesitation. Many organisations are experiencing the departure of experienced and highly knowledgeable people. These people who are leaving take with them a substantial amount of knowledge, not only business-specific information, but also knowledge that has been instructed to them, for them to do their job correctly. The experienced people’s knowledge preferably, the organisation would like to retain them for the future use. The overall aim of extracting tacit knowledge in this case, is to mitigate the negative consequences observed by the removal, moving on or retiring of experienced personnel. One of the problems with the extraction of tacit knowledge within a knowledge management context is identifying the people who possess the worthwhile knowledge.

Haryani and Rose (2005) states that, there is no clear separation between implicit knowledge and explicit knowledge. More so, it is very difficult to find the boundaries between one type of implicit knowledge and the others. This paper acknowledges the thin line dividing each category of knowledge. Nevertheless, the effort of trying to find a clear construct of knowledge, especially implicit knowledge, provides potential by wider application for further study.

Nine concepts, personal, context bounded, informal, experientially acquired, practical, action oriented, goal attainment values, individual, and collective, are extracted. The concept of informal and practical/action-oriented can be incorporated in the concept of experientially acquired knowledge. Therefore, the only contradiction is whether tacit knowledge is personal/individual, or collective.
Han and Gene (2008), provides viewpoints of knowledge sharing by expert teaching professors and their mentees. Little is known about how expert teaching professors share tacit knowledge about teaching with mentees. Without systemic ways to access expert teaching knowledge, professors and mentees can be left with trial and error attempts at surfacing this tacit knowledge, codifying it, and sharing it. Gaining insights about how expert teaching professors share tacit knowledge with mentees may help faculty members, faculty developers, administrators and others to enhance opportunities for and remove barriers to sharing knowledge about excellent teaching.

The art of teaching, situational teaching, habitual teaching, and unconscious or subconscious teaching practices, are the tacit knowledge of PTPs’ teaching expertise. These processes are difficult to be articulated in words, even though they were transformed into explicit knowledge to some degree. The PTPs had difficulty sharing their expertise with colleagues or mentees. Sharing tacit knowledge was often recognized as an impossible task, because the nature of tacit knowledge prevented it from being articulated. However, methods of sharing tacit knowledge were categorized in two ways: observation and BIS. Observation was more frequently mentioned by interviewees than BIS. Sometimes, both methods were mixed to share tacit knowledge. Sharing tacit knowledge through observation was a lengthy process. Observation had merit, in that it allowed observers to absorb the teaching situation holistically.

Edward (2008), suggests that a reflective practice involves the mental process of reflecting, which may or may not be characterized by what is called ‘being reflective.’ A reflective practitioner is a person who has a self-image as a facilitator, where there is an important recognition of the
uncertainties within a profession. A person with a self-image as a facilitator, recognizing the uncertainty within a profession, has the knowledge base of a member of his/her profession, and is aware of the problems that need to be resolved in any professional practice.

To succeed, the reflective practitioner deals with this uncertainty by putting client relationships at the centre of his/her professional practices, with attempts to develop negotiated shared meanings and understandings as a joint process, all of which require reflection. The methodology section outlines the process taken by this work to translate and interpret the transcripts of the study participants. In the reflexive practitioner's perspective the researcher describes his developmental journey towards the evaluative criteria for judging the merit of the research, by addressing his understanding of knowledge management, and compares it with the literature. This study then highlights the dilemma the researcher faced in translating theory into practice, and relates this to the organisation’s knowledge sharing culture. From the action-researcher's perspective, this study discusses the influence of the philosophical framework with the provision of other authenticating point of views.

Frank (2009) examines the contributions and suitability of the available knowledge management (KM) technologies, including the web 2.0 for exploiting implicit knowledge. It proposes an integrated framework for extracting implicit knowledge in organisations, which includes web 2.0 technologies, KM tools, organisational learning (OL) and Community of Practice (CoP). It reviews a comprehensive literature covering an overview of KM theories, KM technologies and OL, and identifies the current state of knowledge relating to implicit knowledge exploitation. The outcomes of the paper indicate that the internet and web 2.0 technologies have stunning
prospects for creating learning communities, where implicit knowledge can be extracted from people. The author recommends that organisations should design procedures and embed them in their web 2.0 collaborative platforms, persuading employees to record their ideas and share them with other members.

One key point to be noted, is that the above KM technologies provide enormous support for creating knowledge not previously known to a ‘learning community’. Once the hidden knowledge is refined and shared, organisations can further explore it for knowledge diffusion and management innovation. The overall knowledge powerhouse begins to expand. In this case, the departure or retirement of knowledge workers will not have a huge negative impact on the business processes.

Fatma (2010), suggests that Knowledge management is the core subject of organisations in today’s challenging world, and a major focus of knowledge management is on transforming tacit knowledge into an explicit one. Since knowledge is constituted in individuals and depends on individual experiences, intuitions, insights and personal judgment, it is difficult to capture. If it is extracted, it may be codified, and become a tangible form of knowledge. Otherwise it is called as tacit knowledge. Since codified knowledge is easy to be shared and used, it is emphasized that the knowledge which provides a competitive advantage is a tacit one, and tacit knowledge is seen as a strategic asset for the competitive advantage and sustainability of organisations.

Establishing an organisational culture that enhances organisational learning is crucial for achieving effectiveness of educational institutions. The principal way of capturing tacit knowledge, is sharing it through various vehicles. However, it is not easy to share knowledge due to various factors.
The electronic infrastructure of the organisation should become appropriate for effective management of knowledge in general. Tele-communication tools (internet, portals etc.), data storage mechanism (databases, document management systems), and some expert systems facilitating knowledge management should be maintained. The technology should be provided and its effective use should be assured. The use of the internet for e-learning, virtual conferences, and the like should be enhanced.

2.6 OVERVIEW OF KNOWLEDGE SHARING AND TRANSFERRING

Knowledge sharing and transferring is a process of communicating and transferring knowledge, explicit and tacit, which is communicated between individuals or communities of people in the work place. Abdullah et al (2009) explains knowledge sharing as a process of exchanging one’s individual knowledge and ideas through discussions or social interaction, which leads to the creation of new knowledge or ideas. Knowledge sharing is speckled as the intractable problem facing knowledge management (Bechina and Bommen 2006; Chow and Chan 2008).

Garvin (1993) suggests that sharing of knowledge involves the transmission of knowledge from one person, group or firm to another. Van den Hoof and De Leeuw (2004) discuss the process of sharing as collecting, organizing, and conversing knowledge from one to another, which implies that knowledge is expanded when it is shared among the people. It is important to manage the sharing process properly, which in turn, improves the following activities among the communities of people, viz., work-quality, decision-making skills, efficiency of problem solving and competency (Alavi and Leidner 1999; Salisbury 2003; Syed and Rowland 2004b; Yang 2007a; 2007b; Widen-Wulff and Suomi 2007).
The term knowledge sharing is different from knowledge transfer (Wang and Noe 2010), in which knowledge transfer is referred to as the movement of knowledge between different units, divisions, or organisations rather than between individuals. With knowledge transfer and knowledge sharing, there are impediments to be considered. Whether it is the individual expert or the “expert” team, knowledge sharing is not straightforward. There are factors that encourage or retard knowledge transfer from personality and attitude, to vocational reinforces. Knowledge sharing causes change in the organisational culture. In either case, a review of the motivational factors that encourage people to share is important, if the knowledge management process has a chance of succeeding.

2.7 STUDIES ON THE DESIGN OF KNOWLEDGE PORTAL

Mirza and Timothy (2002), discuss issues involved in designing an information Portal using XML-based tools. As compared to the traditional HTML-based portals, the use of XML offers several benefits - it provides a great way of efficiently aggregating, classifying, and presenting both structured and unstructured content over the Internet or similar networks.

There are new technologies that would enable the development, implementation and utilisation of knowledge management within an organisation. Enterprise portals facilitate, create, and allow an easier flow of knowledge within the organisation. The enterprise portal utilizes XML-based tools to present, disseminate, and store documents. XML is preferred over HTML due to its data handling capabilities. XML structures the data as well as conveys the meaning about the data, whereas HTML is only concerned with the presentation of the data. There are various areas of research that can be pursued in order to better understand the use of portals for knowledge management in organisations.
Heila (2003) suggests the factors that must be considered during the design and development of an academic portal. A web portal can be defined as a web site that aggregates an array of content and provides a variety of services including search engines, directories, news, e-mail and chat rooms. Portals have evolved to provide a customized gateway to web information. In the academic community, this move to the web includes internal administrative business functions, and increasingly the core functions of teaching and learning.

Similarly, in the research library environment, integrated systems and digital library experiments have migrated to web based functions almost totally. The scholar’s portal would promote the development of and provide access to the highest quality content on the web. Guidelines for the design and development of a web portal for academics are formulated, against the background of the theoretical study and the empirical research results. The results give an indication of the different academic practices that should be supported by an academic portal. Although the internet and the web have the potential to make a huge impact on academics’ task performance, in practice the impact has been limited and these academics’ web literacy was actually quite low. These aspects have to be taken into account during the design and development of the academic portal.

Michael et al (2004), describes that there has been a tremendous growth in the amount of information and resources on the World Wide Web that are useful to researchers and practitioners in the science domain. This paper reviews the existing information retrieval techniques and related literature, and proposes a framework for developing integrated web portals that support information searching and analysis for scientific knowledge. To
validate the approach, the authors implemented a prototype web portal system in the NSE domain, called NanoPort.

The framework provides an integrated approach to building web-based information retrieval and analysis systems that incorporate various techniques and functionalities including collection building, meta-searching, keyword suggestion, and content analysis techniques such as document summarisation, document clustering, topic map visualisation, and patent analysis. The disadvantage is that, the components require different servers in order to speed up.