

# A New Mission for Schools in Hong Kong in the 21<sup>st</sup> Century: Promoting Effective KM

Esther CHAN

Language Centre, Hong Kong Institute of Vocational Education (Chai Wan)  
30 Shing Tai Road, Hong Kong

## ABSTRACT

Knowledge Management, though a hot topic in business, is quite a new concept in schools and in the education sector in Hong Kong. KM involves identifying, preserving, sharing and making the knowledge assets grow. Proper management of the knowledge assets will make the schools or educational organizations more responsive to changes and to operate successfully in the information age. Thus, there is a need to promote effective knowledge management in schools.

The first section of the paper aims to define KM and the relationship of knowledge, information and data. The second section discusses some practical ways that lead to effective handling of knowledge in schools.

**Keywords:** KM, Knowledge Management, KM in schools and Education

## 1. INTRODUCTION

The term Knowledge Management (KM), though flourishes in the business world, is an emerging aspect which is seldom explored in schools or in the education sector. Many teachers and school administrators may not have any knowledge of KM. Some may not realize how important it is to maximize use of the existing knowledge. To promote effective KM, it is necessary to clarify what is meant by knowledge and what is knowledge management.

The term data, information and knowledge are often perceived as interchangeable. Petrides and Nodine considered the three as a continuum [1]. Data are facts and data become information when placed in context. Knowledge develops when people use and react to the information. Galbreath divided educational knowledge into non-digital and digital data [2]. Non digital data include lecture notes, research notes, student notes, course handouts, books, magazines, paper documents, analog video, analog audio etc. whereas digital data include HTML pages, digital audio, digital video, electronic presentations, databases, electronic documents, CD-ROMS, message boards etc. Such classification only represents the explicit forms of knowledge. Knowledge can be in the forms of tacit knowledge and explicit knowledge. Tacit knowledge resides in the heads of people while explicit knowledge is knowledge that is documented in different forms. Nonaka emphasized the inseparable characteristics of tacit knowledge and explicit knowledge. He claimed that the two kinds of knowledge are “mutually complementary entities” and “[t]hey interact with and interchange into each other in the creative activities of human beings.” [3].

Literature shows that the meaning of KM varies. It originates in the business world. Sveiby classified knowledge management

into 2 tracks – the IT track (the management of information) and the people track (the management of people). He described knowledge management as “the art of creating value form an organisation’s intangible assets.” [4]. Barclay and Murray adopted “a three part categorization: (1) mechanistic approaches, (2) cultural/behaviouristic approaches, and (3) systematic approaches to knowledge management.” [5]. Coleman described knowledge management as “the process by which individual learning and experience can be accessed, reflected upon, shared and utilized in order to foster enhanced individual knowledge and, thus, organizational value” [6]. Todd defined KM as “the synergies of organizational and personal practices that effectively tap into, organize and utilize people’s competencies, expertises, skills, talents, thoughts, ideas, intuitions, commitments, innovations, practices, and imaginations, and which integrate these as part of the information resources of an organisation to achieve its goals.” [7]. It seems that many of the definitions are quite business oriented. For the purpose of discussion, KM in this paper limits to effective creating and converting knowledge, capturing and maintaining knowledge, facilitating the flow of knowledge as well as sharing of knowledge so as to help a school to manage changes and to grow.

## 2. STRATEGIES TO PROMOTE KM IN SCHOOLS

“Knowledge management represents significant opportunities for school community to re-engineer its information infrastructure in a more holistic way to create a more diverse and richer information base to support the school’s learning objectives.” [8]. However, most schools have not seriously examined knowledge management and what it means to the schools. Traditionally most schools focus on tangible assets such as the equipment in the schools, the collections of books they possess. Very few of them divert their attention to intangible assets like knowledge even though the main business of schools is knowledge. In order to implement effective knowledge management, schools need to take some initiatives and some of which need to be done step by step. The following are some suggestions:

### 2.1 Arouse the awareness of teachers

KM is not a topical issue in schools. Many teachers may not have any knowledge of KM as “educational institutions are designed and structured in a way that reinforces the idea that my job as a teacher is as an individual teaching *my* kids.” [9]. Adams also shared similar views that “[a]t present, teachers are generally sequestered from each other by classroom or academic office during most of the day. Teacher-student relationships are usually assigned by homeroom and class schedule. These situational constructs have led to an isolation of teachers from teachers, teachers from students, and students from students.” [10]. Teachers and students can hardly see the need to share their

knowledge in such environment. There is a need to convey the ideas of KM to teachers and students. First of all, surveys can be conducted to investigate teachers' understanding and perception. Then workshops or other forms of seminars can be arranged to enhance teachers' understanding of KM and to minimize the difference in perception of the issue.

## 2.2 Identify knowledge assets

There is often a misconception that data is equivalent to knowledge. It is also important to note that the data stored in the schools, if not used, cannot be knowledge. There is a need to define what is valuable and what is not valuable to the schools because not all knowledge can be classified as knowledge assets. Another consideration is that in this information age, knowledge keeps changing and is made obsolete quickly. Schools should decide the kind of knowledge they intend to manage, the articulated explicit knowledge or the unarticulated tacit knowledge and the amount of the two. Zack suggested that "organizations need to manage knowledge both as object and process" but "managers should not blindly accept the apparent tacitness of knowledge" and in situations "where imagination and flexibility are important, knowledge routinization may be inappropriate." [11]. Most importantly, relevant knowledge must be available at the right time and in the right form. In addition "Knowledge management (KM) must be applied in the right place at the right time" because if information is applied, it becomes knowledge [12].

## 2.3 Encourage a culture of knowledge sharing among teachers and students

In the past the society rewarded individual for their personal knowledge and ability. Teachers will think that individual intelligent and knowledge is the asset that makes them competitive. Carroll et al reveal that "the existing culture of schools is highly individual" [13]. Teachers do not see the need to share knowledge. They do not know that by sharing they gain so they tend to hoard their knowledge. They have to know that knowledge "cannot be exhausted; the more it is used, the more it multiplies" [14]. In order to encourage sharing of knowledge, there must be a change in culture. Cultural change is extremely difficult and it takes time. Senior managers should help to foster a culture of trust instead of a culture of competition in order to encourage knowledge sharing. In a conversation between Peter Senge and O'Neil, Senge suggested that "a principal can pull together a group of people who really could start to establishment an environment". [9].

## 2.4 Adopt a more relaxed and open management style

*In parallel with cultural change, there must be a change in the style of management. Most schools in Hong Kong are operated in a bureaucratic manner with direction coming from top management. Such top down approach does not promote changes as decision making lies in the hand of a few people. Fundamental changes are difficult so a restructure of the way of practice is necessary. School principals play a key role in implementing change. First of all principals should examine and reflect their leadership style. Democratic leadership style encourages creativity and innovation and facilitates knowledge building. Jensen & Frederiksen suggested "the form of management is not that of control, formalized, but that of informal – but not anarchic –enabling, understood as the creation of a "culture" of reflexivity. This again can be said to be the creation of a culture of knowledge management." [15]. Therefore, greater autonomy should be given to stakeholders of the schools and school*

*administrators should take the role of facilitators. Different committees can be set up so that more people can be involved. Across discipline and teaching teams cooperation should be encouraged to accelerate knowledge transfer.*

## 2.5 Revise the curriculum

Cultural change needs to be accompanied by a reform in the curriculum. The traditional teaching method of teaching emphasizes on passive knowledge transmission. Teachers are merely instructors. Sveiby pointed out that lecture is the least effective way of knowledge transfer [16]. Lecturing does not promote active construction of knowledge so more learner-centered approach and co-operative learning should be adopted. There should be better integration of subjects rather than placing emphasis on learning of individual subject areas to allow knowledge learnt in one area to be transferred to another subject area. Learning tasks should be in the form of group project to encourage knowledge sharing among members. Beyers claimed "[i]f pupils are to succeed in life in the business world, team work must be another skill in their tool bag for life." [17]. Problem based activities should also be introduced to help students to transfer their knowledge in order to solve problem. "Achieving results in knowledge management is the product of a two fold evolution of an existing knowledge: its enhancement (depth) and its transfer (application)." [18]. Self learning is strongly advisable so schools should have self learning centers with resources that enable students to acquire knowledge in their own time at their own pace.

## 2.6 Create a new post for handling knowledge

In order to define, categorize, refine and properly maintain knowledge, someone in the schools has to take up such duties. The best way is to appoint someone to handle the tasks. Teachers are already heavily loaded with teaching. The time they can afford to contribute will not be sufficient to perform the duties well. If the duty is delegated to a particular person, work can be better coordinated. Schools should seek approval from the Education Department to create a new post of knowledge coordinator or knowledge officer or knowledge manager. The roles of the officer or coordinator or manager should be made explicit to the manager himself or herself and to everyone in the school. He/She has to have the trust and cooperation of the staff members especially in the process of capturing knowledge.

## 2.7 Involve parents and students

The age of information implies changes. In order to cope with changes, a school should operate as a business unit. If a school is viewed as a business unit, its mission is to satisfy the needs of the parents and students. Beyers claimed "A major shift in the 'business of education' model is that the pupils should be regarded as the clients and that the schools make more of an effort to address their specific needs." [17]. Parents should be invited to be members of different committees in the school so that their voices could be heard and their interests would be better taken care of. In most schools in Hong Kong, there are already Parent Teacher Associations. However, most of the activities organized are of social nature. Real involvement of parents in policy making needs to be strengthened.

## 2.8 Exploit the knowledge of students

Teachers are the important source of knowledge in schools and yet focus should not be only on the teachers. Students bring along a

vast of knowledge assets to the school and their knowledge should not be ignored. According to Beyers, “[a]nother important element that is often overlooked in any educational institution is the intellectual potential of the learners.” [17]. Students in Hong Kong can generally be described as passive receivers. Seldom do students take any initiation in their learning. Students often rely a lot on their teachers. Such attitude prohibits the acquisition of knowledge. Students should be reminded not to rely on their teachers and they should be encouraged to work independently as well as collaboratively. Students should be given chances to present their work to other fellow students through web pages. Schools can organize activities like talent shows, quizzes, debates that promote and facilitate knowledge building and knowledge sharing.

### 2.9 Encourage researches, conference participation and paper presentations

“Research is wonderful at generating new data, new information, more knowledge and deeper learning.” [19]. Conducting researches in higher education is mandatory but not in primary and secondary schools. Therefore, a few primary and secondary teachers carry out researches or take part in researches. In order to construct knowledge, teachers should be encouraged to involve in researches. Stake claimed that “case study researchers assist readers in the construction of knowledge.” “Researchers narrate the case and readers “come to know some things told, as if he or she had experienced them.” and through such social process, knowledge can be constructed and understanding can be enriched [20].

In line with researches, secondary and primary school teachers should also be encouraged to attend conferences and present papers. Through proceeding writing and paper presentation, individual tacit knowledge is transferred to individual explicit knowledge. Cope suggested that “writing conference papers helps an individual to work through internal assumptions and models, and turn them into theories and models that others can apply.” [21]. Individuals are sponsored by higher institutions for conference participation but not for the case of primary and secondary teachers. Schools should give financial support as well as study leave to teachers for paper presentation.

### 2.10 Employ IT

IT facilitates all aspects of knowledge management. IT does not only facilitate the flow of knowledge. It also helps to create knowledge and transfer knowledge. Networking is essential. “In order to get a knowledge management program off the ground, institutions should start at the individual level, create departmental knowledge, create domains of knowledge across departments that share academic interests or disciplines, create knowledge management networks across an entire institution, and network institutional knowledge management with the knowledge management systems of other institutions and corporations.” [2]. Many schools have already had their intranets set up. Through the intranets, teachers can access different documents of the school such as circulars, reports and other documents. Communication tool such as email is very common for information sharing among teachers and teachers, students and students and teachers and students. Additional environments such as newsgroup, bulletin board, forum, chat etc should be introduced to allow more channels of communication for all the parties. Schools can assign server space for teachers to place their notes, handouts, publication etc. and have them properly categorized and maintained for easy reference as proper data storage assists

knowledge retrieval. Schools should acquire electronic copies or e-books or on-line resources for teachers and students so that they can acquire new knowledge. In addition, e-learning packages on different content areas can be purchased to allow teachers and students to learn in their own time and at their own pace. Investment on different software programs enables knowledge spiral and knowledge conversion. Data searching tools enable fast searching functions which accelerate information analysis. Data mining and data mapping tools help to see the relations of different concepts and assists knowledge recycling. “Mapping and mining tools could aid in making the design and management of knowledge project more transparent to students and teachers.” [10].

### 2.11 Provide incentives for knowledge sharing

People need to be motivated to share their knowledge. Unlike business organizations, it might be difficult to allocate bonus in the education setting. However, if teachers are willing to share their knowledge, their effort should be recorded in the appraisal. Other forms of incentives can also be considered. Hall recommended two different kinds of rewards: “explicit rewards” and “soft rewards”. Explicit rewards include economic rewards, access to information and knowledge as reward and career advancement/security as reward whereas soft rewards comprise enhanced reputation and personal satisfaction [22]. Todd suggested “competitions and prizes (morning tea with the Librarian) generate enthusiasm and fun. Capitalise on opportunities for building professional esteem and pride, as these tend to encourage people to share their experiences and expertises.” [8].

## 3. CONCLUSIONS

Knowledge is the business of education which is seldom properly handled. It is time for educators to think about knowledge management and to promote it in schools in Hong Kong. To make teachers and administrators fully embrace the ideas may take a long time but it is time to make the move. The concept of knowledge sharing should be spread in schools. Then the culture of knowledge sharing can gradually be established. A change of role of teachers and administrators as well as a curriculum reform help to leverage knowledge efficiently. IT can be employed as a knowledge management tool to enhance all aspects of knowledge management. Literature examining knowledge management in schools in Hong Kong is scarce. Therefore, the mission of knowledge management should be one of the top priorities of all schools in the 21<sup>st</sup> century. “The use of a knowledge management approach in education can enable all teachers to work better.” [23].

### References

- [1] Petrides, L.A. & Nodine, T. R. (2003). Knowledge in Education: Defining the Landscape. The Institute for the Study of Knowledge Management in Education.
- [2] Galbreath, J. (2000). Knowledge Management Technology in Education: An Overview. *Educational Technology*, September-October 2000. P.28-33
- [3] Nonaka, I. (1995). *The Knowledge Creating Company: How Japanese Companies Create the Dynamics of Innovation*. New York: Oxford University Press.
- [4] Sveiby, K. (1996). What is Knowledge Management? <<http://www.sveiby.com.au/KnowledgeManagement.html>> (11 August 2001)

- [5] Barclay, R. O. & Murray, P. C. (1997). What is Knowledge Management? Knowledge Praxis. Knowledge Management Associates. < <http://www.media-access.com/whatis.html>> (14 August 2001)
- [6] Coleman, D. (1997). Knowledge Management: The Next Golden Egg is Groupware. *Techsearch*. March 31, 1997, Issue:729. <<http://content.techweb.com/se/directlink.cgi?CRN19970331S0066>> (14 August 2001)
- [7] Todd, R. (1999) Reading the future: Knowledge Management: 1. Background and Key Concepts. *Scan*. 18(1). P. 42-46.
- [8] Todd, R. (2001). Building a Knowledge-sharing Culture. <<http://www.curriculum.edu.au/scis/connect/cnetw01/37know.htm>> (1 August 2001)
- [9] O'Neil, J. (1995). On Schools as Learning Organizations: A Conversation with Peter Senge. *Educational Leadership*. Vol 52(7). <<http://www.ascd.org/readingroom/edlead/9504/oneil.html>> (1 August 2001)
- [10] Adams, E. C. (2000). Emerging Knowledge Management Approach and Educational Organizations. *OTH online*. Vol 8(2). <[http://www.camfordpublishing.com/oth/online/v8\\_no2\\_02.htm](http://www.camfordpublishing.com/oth/online/v8_no2_02.htm)> (8 August 2001)
- [11] Zack, M.H. (1998). Managing Codified Knowledge. *Sloan Management Review*. Vol 40(5). P.45-58 <<http://www.cba.neu.edu/~mzack/articles/kmarch/kmarch>>(8 August 2001)
- [12] Coleman, D. (1998). Taking The Best Approach To Knowledge. *Techsearch*. June 01, 1998, Issue: 791 <<http://content.techweb.com/se/directlink.cgi?CRN19980601S0095>> (14 August 2001)
- [13] Carroll, J.M. Rosson, M.B., Dunlap, D., Isenhour, P. (2003). Frameworks for Sharing Knowledge: Toward a Professional Language for Teaching Practices. Proceedings of the 36<sup>th</sup> Hawaii International Conference on System Sciences – 2003.
- [14] Duderstadt, J. J. (1997). The Future of the University in an Age of Knowledge. *JALN*. Volume 1(2). <<http://www.aln.org/alnweb/journal/issue2/duderstadt.htm>> (8 August 2001)
- [15] Jensen, H. S. & Frederiksen. (2001). Knowledge management strategies and practices in public and private organizations and firms: case studies. Proceeding of OECD seminar on Knowledge Management: "Learning-by comparing" Experiences from private firms and public organizations February 2001
- [16] Sveiby, K. (1997). The New Organizational Wealth : Managing & Measuring Knowledge-based Assets. San Francisco: Berrett-Koehler Publisher, Inc.
- [17] Beyers, R. (1999). The Connected Learning Community- A Classic Case for Knowledge Management. <<http://www.stalban.pta.school.za/collegenew/mainpages/project/clckm.htm>>(8 August 2001)
- [18] Godbout, A. J. (1999). Filtering Knowledge: Changing Information into Knowledge Assets. *Journal of Systemic Knowledge Management*, 1999. <<http://www.tlinc.com/articl11.htm>> (24 August 2001)
- [19] Aitkin, D. (2000). Turning Education Around. Address to the Global Dialogue 'Building Learning Societies' Hannover, Germany, 6 September 2000.
- [20] Stake, R. E. (1994). Case Studies. In Denzin, N. K. and Lincoln, Y. S. (eds), *Handbook of Qualitative Research*. California: Sage Publications. P.236-247
- [21] Cope, M. (1998). *Leading the Organisation to Learn: The 10 Levers for Putting Knowledge and Learning to Work*. Pitman Publishing.
- [22] Hall, H. (2001). Input-friendliness: motivating knowledge sharing across intranets. *Journal of Information Science*, 27 (3) 2002. P.139–146. <<http://www.knowledgeboard.com/library/jis.pdf>> (27 April 2004)
- [23] Hannum, W. H. (2001). Knowledge management in education: helping teachers to work better. *Educational Technology*. May/June 2001.