



Fakultas Bisnis & Manajemen  
Universitas Widyatama



Certified Management System  
DIN EN ISO 9001:2000

# JURNAL BISNIS, MANAJEMEN & EKONOMI

✓ Anton Mulyono Aziz  
Identifikasi Peluang dan Strategi Usaha dikaitkan dengan sumber ide serta tantangan dan hambatan

✓ Riki Martusa  
Upaya Memenuhi Kebutuhan Sistem Industri Modern melalui Penerapan Total Quality Management pada Perguruan Tinggi di Indonesia

✓ Shine Pintro Patiro dan Iwan Ridwansyah  
Pengaruh CRM terhadap Brand Loyalti pengguna Merek "BRITAMA" Studi kasus pada PT BRI

✓ Erly Sherlita  
Peranan Aktivitas Lindung Nilai dalam menurunkan Risiko Perdagangan Internasional

Sri Astuti Pratminingsih  
Applying Knowledge Management Practice in Higher Education

✓ Zulganef & Lasmanah  
Analisis niat siswa SMU untuk melanjutkan studi ke Perguruan Tinggi melalui *Theory of Planned Behavior*

✓ Mutiasari & Maya Ariyanti  
Pengaruh Pelaksanaan Kegiatan Periklanan T. PLN (Persero) Distribusi Jawa Barat dan Banten Terhadap Tingkat Respons Konsumen di wilayah Bandung Timur

# APPLYING KNOWLEDGE MANAGEMENT PRACTICES IN HIGHER EDUCATION

Sri Astuti Pratminingsih

## ABSTRACT

The business of universities is all about knowledge. Over the centuries, they have developed a knowledge culture around this business. The rapidly expanding use of technology in teaching and learning, and the transformed economy basis upon which universities are instituted, have caused universities to transform the ways in which knowledge is produced, stored, disseminated and authorized.

Applying knowledge management in universities is one way to increase its effectiveness in attaining the goals and missions. This article outlines the basic concepts of knowledge management as it is applied in business sector, considers trends, and explores how it might be applied in higher education institutions.

**Key words:** Knowledge management, Higher education.

## INTRODUCTION

As globalization generates knowledge-based economies throughout the world, organizations are seeking to manage knowledge to achieve their mission and goals. Knowledge management provides a range of applications that can be used to manage knowledge in many different organizational settings including universities.

The university environment is essentially a collection of individual experts who constitute an accepted body of knowledge for many degree-granting areas. As such, universities have traditionally been utilized as transfer mechanism for providing students with a knowledge base that will enable the students to function and thrive on graduation (Towney, 2003). However, the success of this model is contingent on the critical assumption that universities possess relevant expertise and are up-to-date with regard to the knowledge and skills that students will need. Such is the problem specifically facing universities today.

As faculty members, at least in part, are tasked with the role of teaching currently accepted and relevant knowledge and practices. In order to do so, faculty members must first be able to identify what is accepted and relevant, and then take the necessary steps needed to ensure that faculty members and instructional staff possess the appropriate knowledge and expertise.

However, distinguishing what is relevant from the many "fads" that frequently gain short-term popularity is often difficult. Complicating matters is the fact that the rate of knowledge creation is accelerating (Brooking, 1996), which means that colleges must not only periodically retool segments of their programs, but must do so at a much quicker pace. Thus, in a manner similar to business organizations, it is reasonable to expect that university can benefit greatly from the development and application of certain knowledge management (KM) mechanism that assist in identifying not only what is known, but also what must be known.

Fortunately, the concepts related to KM, as well as the mechanism used to manage organizational knowledge, are well known to many in academia. Whether taught in the classroom or the focus of primary research, the concept of KM and its

implications for a wide variety of organizations continues to receive considerable attention on the college campus (Stoffle, 1996).

Higher education institutions have significant opportunities to apply knowledge management practice to support every part of their mission (Kidwell, 2001). Knowledge management should not strike higher education institutions as a radically new idea; rather it is a new spin on their *raison d'être* (Kidwell, 2001). The problem is that it is such a wide open area of study that it is difficult to understand the implications of knowledge management for an educational setting (Thorn, 2001).

This paper offers a basic introduction to the application of knowledge management in higher education institution. The paper is organized as follows: First, it provides a brief discussion of KM and organizational learning. Next, it discusses some of the barriers that hinder the adoption of KM within the college setting. Then the paper develops a framework for adapting KM to the college setting. And finally, it concludes with some general remarks.

## KNOWLEDGE MANAGEMENT

In recent years, a new phrase—knowledge management—has entered the lexicon. For many in the academic world, this is an old concept, a function historically performed by librarians (Hawkins, 2000). However, in the digital era this term has taken on a new nuance. According to Webster's Dictionary, knowledge is "the fact or condition of knowing something with familiarity gained through experience or association". In practice, though, there are many possible equally plausible definitions of knowledge. Rowley (2002) argues that knowledge management is the management of processes that govern the creation, dissemination and utilization of knowledge by merging technologies, organizational structures and people to create the most effective learning, problem solving, and decision making in an organization.

Knowledge can be defined as information that is relevant, actionable, and linked to meaningful behavior and is characterized by its tacit elements that are derived from firsthand experience. It is also generally accepted that knowledge, or intellectual capital, has become an important source for wealth creation and may provide organizations with the only lasting basis for a sustainable competitive advantage (e.g. Cohen, 1998; Laszlo and Laszlo, 2002)

From this diagram Fleming concludes that:

- Information relates to description, definition or perspective ( what, who, when, where)
- Knowledge comprises strategy, practice, method or approach (how)
- Wisdom embodies principles, insight, moral or archetype (why).

Kidwell (2000) distinguishes between 'explicit' and 'tacit' knowledge. "Explicit knowledge is formal and systematic. For this reason it can be easily communicated and shared, in product specifications or a scientific formula or a computer program. Tacit knowledge is highly personal. It is hard to formalize and therefore difficult, if not impossible, to communicate." Tacit or implicit knowledge (also referred to as 'experimental' knowledge) is thus both unrecorded and unarticulated.

Fleming (1996) traces the knowledge from data processed into information in figure 1.

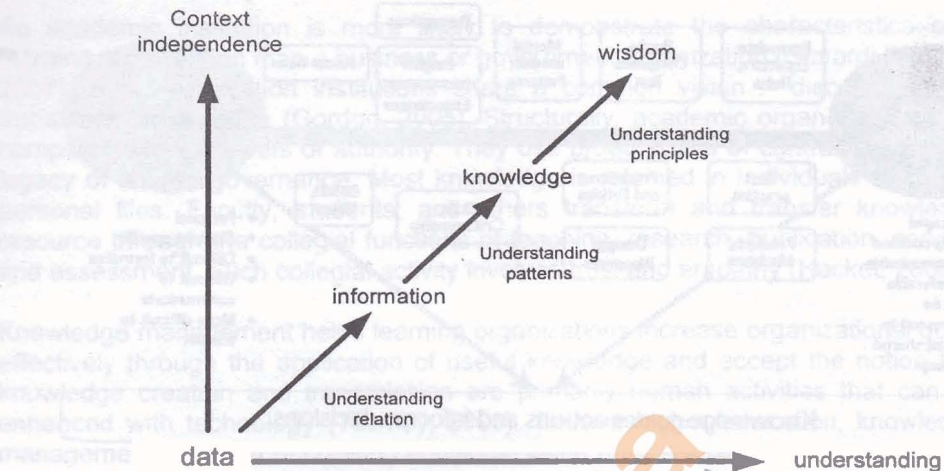


Figure 1

A popular framework for thinking about knowledge proposes two main types of knowledge: explicit and tacit (see Figure 2). Explicit knowledge is documented information that can facilitate actions. It can be expressed in formal, shared language. Examples include formulas, equations, rules, and best practices. Explicit knowledge is:

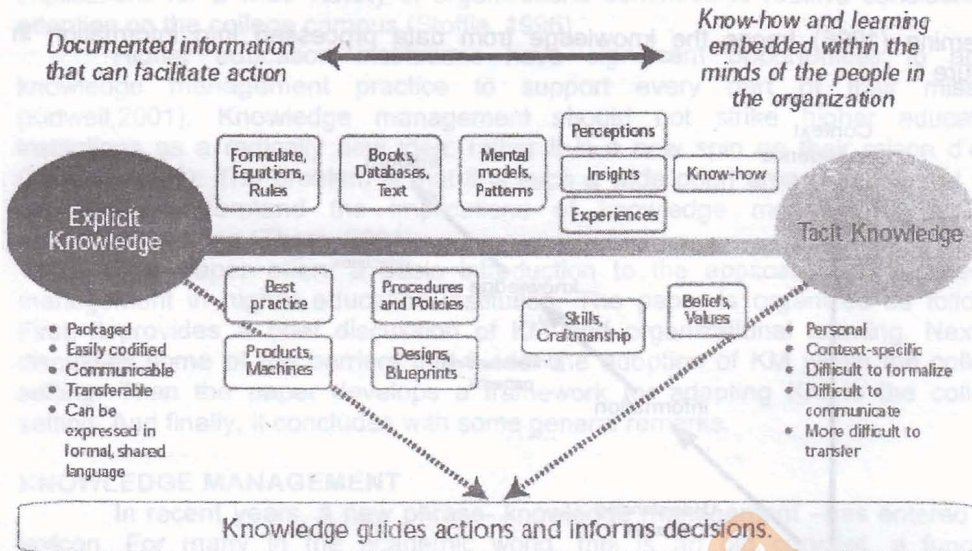
- Package
- Easily codified
- Communicable
- Transferable

Tacit knowledge is know-how and learning embedded within the minds of the people in an organization. It involves perceptions, insight, experiences, and craftsmanship. Tacit knowledge is:

- Personal
- Context-specific
- Difficult to formalize
- Difficult to communicate
- More difficult to transfer

Most business actions require the guidance of both explicit and tacit knowledge.

How does knowledge work in organizations? Knowledge originates in individuals, but it is embodied in teams and organizations, as shown in Figure 2. In an organization, examples of explicit knowledge are strategies, methodologies, process, patents, products, and services. Examples of tacit knowledge in an organizational context are skills and competencies, experiences, relationships within and outside the organization, individual beliefs and values, and ideas.



Source: Copyright 2000, PricewaterhouseCoopers LLP

Knowledge also is embedded in work process, and it exists in all core functions of an organization as well as in its systems and infrastructure. Effective knowledge management programs identify and leverage the know-how embedded in work, with a focus on how it will be applied. The challenge in knowledge management is to make the right knowledge available to the right people at the right time.

Cross and Baird (2000) identified five types of knowledge commonly used in organizations. The first type of knowledge is that embedded in the minds of individuals. This knowledge is gained through working experience. Second kind of knowledge is knowledge held in work groups, such as consensus on work rules. The kind of knowledge in organizations is knowledge that has been documented and organized for used. A fourth kind of knowledge is knowledge that is embedded in organizational process. A fifth kind of knowledge is embedded in products and services. Each type of knowledge can be used to achieve organizational missions and goals.

### Knowledge Management and Universities

In higher education, knowledge management can be defined as the set of organizational process that create and transfer knowledge supporting the attainment of academic and organizational goals (Stoffle, 1996). Reid (2000) purposes that knowledge management as a set of processes that create, organize, share, and apply knowledge to optimize the attainment of universities missions and goals. The application of knowledge management in universities is fairly recent (Hafstad, 1997).

Thomas Davenport's meta-analysis of knowledge management research (Davenport, 2002) indicates that "knowledge is created invisibly in the human brain and only the right organizational climate can persuade people to create, reveal, share, and use it." Davenport believes that knowledge management is most

effective in learning communities, defined as those organizations with shared vision and practice, flat organizational relationships, and a sense of community characterized by empathy and trust.

An academic institution is more likely to demonstrate the characteristics of a learning organization than a business or government organization (Sunardi Brahma, 2007). Higher education institutions share a common vision – discovering and transferring knowledge (Gordon, 2005). Structurally, academic organizations have comparatively few levels of authority. They use broad spans of control and have a legacy of shared governance. Most knowledge is retained in individuals' heads or personal files. Faculty, students, and others transform and transfer knowledge resource through the collegial functions of teaching, research, publication, service, and assessment. Such collegial activity involves trust and empathy (Hacket, 2000).

Knowledge management helps learning organizations increase organizational goals effectively through the application of useful knowledge and accept the notion that knowledge creation and transmission are primarily human activities that can be enhanced with technology (Towney, 2003). Thus in higher education, knowledge management is the art of creating additional value from selected organizational and academic knowledge assets. Given the role of knowledge in higher education, is significant potential to improve academic effectiveness and accountability (Stoffle, 1996).

Laurence Prusak (1997) suggests six factors which make organization to actively manage knowledge resources. First, an accelerating world results in rapid knowledge decay and the need to create useful knowledge more quickly. Universities need to undertake change to address competition and remain socially effective (Gordon, 2005). Second, more and more service providers-like data or portal vendors are offering integrated knowledge management as a part of their product. Resulting knowledge created by this software can be applied in a ways that contribute to universities success. Third, globalization and telecommunication networks are permitting universities to create distributed system of higher education. Fourth, personnel turn over is increasing in academia. Knowledge that at one time was embedded in one person for a career now leaves as individuals change jobs more frequently. Fifth, virtual operations create additional needs for knowledge embedded in process. Finally, knowledge needs are interconnected.

University knowledge needs differ from corporate needs in that universities seek to share scholarly knowledge for the good of society whereas corporations seek a profit. However, it also important to remember that universities have begun to manage knowledge as intellectual capital to be sold or battered (Kennedy, 1998).

Chodorow and Lyman (1998) suggest that managing the comparatively large amount of knowledge in a university is a complex and subtle process that involves priorities, needs, tools and administrative support components.

### **Applying KM in Higher Education**

As discuss previously, using knowledge management techniques and technologies in higher education is as vital as it is in the corporate sector. If done effectively, they

can lead to better decision-making capabilities, reduce "product" development cycle time (for example, curriculum development and research), improved academic and administrative services and reduced costs. Kidwell J. (2001) suggested that KM can be applied in higher education as an institutional approach that lead to exponential improvements in sharing knowledge both explicit and tacit and the subsequent surge benefits. She gave the illustration how knowledge management application could benefit a number of university process and services: the research process, curriculum development process, student and alumni services and administrative services.

**Table 1 : Application and Benefits of KM for the Research Process**

Knowledge Management Application	Benefit
<p>A repository of:</p> <ul style="list-style-type: none"> <li>▪ Research interest within institution or at affiliated institutions (potential subcontractors).</li> <li>▪ Research results (where possible) and funding organizations (federal agencies, foundations, and corporations) with easy search capabilities to facilitate interdisciplinary opportunities.</li> <li>▪ Commercial opportunities for research result</li> </ul> <p>A portal for research administration procedures and best practice related to:</p> <ul style="list-style-type: none"> <li>▪ Funding opportunities.</li> <li>▪ Pre-populated proposals, budgets, and protocols.</li> <li>▪ Proposal-routing policies and procedures.</li> <li>▪ Award notification, account set up, and negotiation policies and procedures.</li> <li>▪ Technical and financial report templates and policies and procedures.</li> <li>▪ Overview of internal services, resources and staff</li> </ul>	<ul style="list-style-type: none"> <li>▪ Increased competitiveness and responsiveness for research grants, contracts and commercial opportunities.</li> <li>▪ Reduced turnaround time for research.</li> <li>▪ Minimized devotion of research resources to administrative tasks.</li> <li>▪ Facilitation of interdisciplinary researches.</li> <li>▪ Leveraging of previous research and proposal efforts. Improved internal and external services and effectiveness.</li> <li>▪ Reduced administrative costs.</li> </ul>

**Table 2 : Application and Benefits of KM for the Curriculum Development Process**

Knowledge Management Application	Benefit
<ul style="list-style-type: none"> <li>▪ Repository of curriculum revision efforts that includes research conducted, effectiveness measures, best practice, lesson learn, etc.</li> <li>▪ Repository of content modularized and arranged to facilitate interdisciplinary curriculum design and development.</li> <li>▪ Portal of information related to teaching and learning with technology, including faculty development opportunities, outcomes tracking, lessons learned, best practices, technology overviews, etc.</li> <li>▪ "Hubs" of information in each disciplinary area, including up date materials, recent publications, applicable research, etc.</li> <li>▪ Repository of pedagogy and assessment technique, including best practice, out-comes tracking, faculty</li> </ul>	<ul style="list-style-type: none"> <li>▪ Enhanced quality of curriculum and programs by identifying and leveraging best practice and monitoring outcomes.</li> <li>▪ Improved speed of curriculum revision and updating</li> <li>▪ Enhanced faculty development efforts, especially for new faculty</li> <li>▪ Improved administrative services related to teaching and learning with technology</li> <li>▪ Improved responsiveness by</li> </ul>

<p>development opportunities, and research.</p> <ul style="list-style-type: none"> <li>▪ Repository of analyzed student evaluations each semester for lessons learned and best practice for all faculty</li> <li>▪ Portal for new faculty with guides for developing curriculum, working with senior faculty, establishing effective teaching styles, advising do's and don'ts, supervising PhD students, and so forth.</li> <li>▪ Repository of corporate relationships to identify curriculum design advisory task forces, guest speakers, adjuncts, case study sites, and so forth.</li> </ul>	<p>monitoring and incorporating lessons learned from the experiences of colleagues, student evaluations, and corporate or other constituent input.</p> <ul style="list-style-type: none"> <li>▪ Interdisciplinary curriculum design and development facilitated by navigating across departmental boundaries</li> </ul>
---	---

**Table 3 : Application and Benefits of KM for Student and Alumni Services**

Knowledge Management Application	Benefit
<ul style="list-style-type: none"> <li>▪ Portal for student services for both students and for faculty and staff at the institution so that they are well informed to advice students. Information could include policies and procedures related to admissions, financial aid, registration, degree audit, billing, payment process, advising and tutoring, housing dining, and other services. This portal could be personalized for individual schools or student groups to customize service offerings.</li> <li>▪ Portal for career placement services (potentially part of a large portal for all corporate connections) to provide a one-stop service center for students, but also for faculty and staff to ensure they are informed.</li> <li>▪ Repository of student affairs services for faculty and staff to ensure all constituents understand existing services and can provide proper advising.</li> <li>▪ Portal for alumni and development services to minimize redundant efforts; capture contact reports; and link to research, curriculum, and career development efforts.</li> <li>▪ Portal for information on outreach constituents to integrate efforts and minimize redundant efforts.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Improved services for students</li> <li>▪ Improved service capability of faculty and staff</li> <li>▪ Improved services for alumni and other external constituents.</li> <li>▪ Improved effectiveness and efficiency of advising efforts (to integrate fragmented efforts currently undertaken by faculty, academic, support staff, student services staff, and student affairs staff</li> </ul>

**Table 4 : Application and Benefits of KM Administrative Services**

Knowledge Management Application	Benefit
<ul style="list-style-type: none"> <li>▪ Portal for financial services (that is, budgeting and accounting) that includes frequent ask questions, best practices, procedures, templates, and communities of interest to share information and serve as impetus for improvement efforts.</li> <li>▪ Portal for procurement (that is, purchasing, accounts payable, receiving, warehousing) that includes frequent ask questions, best practices, procedures, templates, and communities of interest (for example, by commodity,</li> </ul>	<ul style="list-style-type: none"> <li>▪ Improved effectiveness and efficiency of administrative services.</li> <li>▪ Enhanced ability to identify improvement efforts.</li> <li>▪ Improved ability to support the trend toward decentralization by</li> </ul>

<p>purchasing vehicle, vendor, and so forth) to share information and serve as impetus for improvement efforts (for example, leverage lessons learned from others in the institution, design on-line vendor sites such as Web-based catalogs).</p> <ul style="list-style-type: none"> <li>▪ Portal for human resources (that is, vacancy-to-hire, payroll, affirmative action, and so forth) that includes frequent ask questions, best practices, procedures, templates, and communities of interest to share information and serve as impetus for improvement efforts.</li> </ul>	<p>providing guidelines for consistency.</p> <ul style="list-style-type: none"> <li>▪ Improved compliance with administrative policies such as procurement, preferred vendors, procurement card policies, budgeting procedures, affirmative action guidelines, etc.</li> <li>▪ Improved responsiveness and communication capabilities.</li> </ul>
---	---

**Table 5 : Application and Benefits of KM for Strategic Planning**

Knowledge Management Application	Benefit
<ul style="list-style-type: none"> <li>▪ Office of knowledge Management, emerging from previous Office of Institutional Research.</li> <li>▪ Portal for internal information that catalogs the strategic plans, report developed for external audiences, clear data definitions, presentations by executives, etc.</li> <li>▪ Portal for external information, including benchmark studies, environmental scans, competitor data, links to research groups, higher education research groups and publications, presentation by executives.</li> <li>▪ Monthly market watch developed in tandem with Admissions, Continuing Education, Alumni and Development, and others that document key trends and potential implications.</li> <li>▪ Repository of data related to accountability and outcomes tracking by monitoring assessments, performance indicator, benchmarking, etc.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Improved ability to support the trend toward decentralized strategic planning and decision making. Better information leads to better decisions.</li> <li>▪ Improved sharing of internal and external information to minimize redundant efforts and lessen the reporting burden plaguing many institutions today.</li> <li>▪ Enhance ability to develop up-date market focus strategic plans</li> <li>▪ Shared knowledge from a variety of constituents to begin to create a learning organization which is responsive to market trends</li> </ul>

### Factors Hinder the Success of K M within the academic setting

There are many factors that hinder the application of KM in higher education. Some of them are:

#### 1. Culture and Bureaucratic in Higher education

Effective KM is difficult to learning and regularly fails to learn from past experiences. Researches have found that even in firms that embrace innovation and recognize the importance of managing knowledge, some best practice still take many months or even years, to be shared and adopted throughout other parts of organization

(Szulanski, 1996). Within the academic setting, KM is often difficult because of existing cultural and bureaucratic factors that act as barriers to the KM process. For example, instead of considering knowledge as an asset that increases in value when shared, many faculty members considered knowledge as proprietary and something that is not shared freely (Wind and Mein, 1999). Given the nature of academia and the emphasis placed on conducting primary research, it not surprising that some faculty members view knowledge as a possible source of differentiation, and thus defer sharing certain aspects of their knowledge. Unfortunately, however, when knowledge is viewed as a source of power it acts as "separator" between the haves and have-nots (Wig, 1999).

## **2. Lack of interest among some faculty members.**

For a variety of reasons, some of faculty members have become complacent and have disengaged from the learning process. While certainly not in majority, such faculty members still act as a drag on the university because they absorb scarce resources, but do not contribute to the advancement of the learning process (Soetoko, 2006). The negative impact of nonperforming faculty members is further intensified by the fact that they not only fail to expand the university's knowledge base, but they also preclude the recruitment of other faculty members who might make positive contributions.

## **3. Variety of individual's ability among faculty members**

Faculty members from varied backgrounds often possess different levels of knowledge stores and capabilities (Hawkins, 2000). For example, due to more industry experience, educational opportunities, or personal application, one faculty member may possess knowledge and expertise about advanced statistical techniques that are well beyond the comprehension of a fellow faculty member. While the former may be willing to explain the statistical technique to the latter, the latter may not be sufficiently grounded in the basics of statistics to fully understand the explanation. While this example demonstrates a positive aspect of KM process (a willingness to share knowledge), it also illustrates the need for knowledge-seeking faculty members to make a significant commitment to the learning process, a commitment that some are not willing to make.

## **4. Lack of relationship building within many colleges of business.**

Given that growing number of faculty members choose to fulfill many of their obligations from a location other than their college offices, the relationships that evolve from regular personal interactions often fail to materialize. Because so many faculty members are not in regular face to face contact, opportunities for serendipitous knowledge exchanges are eliminated or severely reduced. And suggested by Szulanski (1996), the lack of intra organizational relationships often leads to the failure of communication process. In other words, the social network that supports the formal and informal mechanisms that are needed for knowledge sharing to occur, often fail to evolve within the organization.

## 5. Unawareness on both ends of the transfer

Just as in large business organizations, knowledge transfer within the university is often inhibited because neither the source nor the recipient knows where or from whom to seek certain type of knowledge (Stoffle, 1996). While efforts have been made to help keep faculty members informed and engaged in the knowledge sharing process, such efforts often fail short. For example, regularly scheduled research seminars provide an effective forum for sharing ideas; however, the seminars are often but not always, promoted within specific functional areas and may not be well attended by faculty members (UTAMA, 2006). In addition, many colleges of business have come to rely on the development of intranets to help keep faculty members informed concerning available knowledge resources. However, as with many corporate intranets are often difficult to keep current and tend to be underutilized.

## 6. Time and Resource constraint

Even when a knowledge source has been identified and is readily available, faculty members often lack of sufficient time to take advantage of learning opportunities. Teaching commitments, committee meetings, service load, and office hours all demand as significant amount of faculty members' time (Sharobeam & Howard, 2002). Add to this, research activities, conference presentations and consulting activities, and the time available for formal and informal in knowledge sharing is severely restricted (Hadjinicola & Soteriou, 2004). Thus, given the many teaching, service and research activities demands that faculty members must contend with, allocating additional time to knowledge sharing activities is often difficult or impractical. As with time constraints, resource constraints often inhibit faculty members from taking advantage of knowledge development and sharing activities. Especially during periods when budgets are being scaled back, funds needed to attend conferences, purchased special data bases, and invite guest speakers to present research seminars tend to be slightly curtailed.

## Key Success Factors in Applying KM at academic setting

Is higher education ready to embrace KM? Hacket (2000) suggests that a key ingredient in an institution' readiness to embrace KM is its culture; the beliefs, values, norms and behaviors that are unique to organization. Sivan (1999) argues that before an organization can adopt KM strategy, it must develop a KM culture. Sivan constructs culture as consisting of beliefs and practices. From the perspective of beliefs, can be assumed that members of a university community have a belief in knowledge, although these beliefs clearly differ across discipline boundaries, and are contested within them (Becher, 1989). Kidwell (2001) indicates that as an institution launches knowledge management initiatives, it can learn lessons from its counterparts in corporate sector. Further she said that there are some key points to remember in launching knowledge management:

- Start with strategy. Before doing anything else, determine what you want to accomplish with KM
- Organizational infrastructure, human resources, financial measurements of success, and information technology should support knowledge management. Think of technology as an enabler, and measure the impact

of knowledge management in financial terms, such as cost reductions, customer satisfaction and speed to market.

- Seek a high level champion for the initiative- some one who believes in its benefits and who can advocate as needed.
- Select a pilot project for knowledge management- Ideally one with high impact on the organization but of low risk to build credibility for knowledge management.
- Develop a detailed action plan for the pilot that defines the process, the IT infrastructure, and the roles and incentives of the pilot project team.
- Assess the result and refine the action plan.

Towney (2003) stated that whatever organizational arrangement is made, it is clear that heavy participation from many IT personnel will be required. During the first period of development, as organization learn how to use knowledge management effectively, knowledge management and IT practitioners will informally collaborate and share. At some point a critical mass of knowledge management activity will occur. Formal responsibility then will be assigned, resource committed and formal responsibility established.

Researches on knowledge management have been conducted by many researchers and these researches indicate that there are seven factors which are critical for success of knowledge management (Towney, 2003):

1. Institutional leaders must identify knowledge management as priority and encourage participation throughout organization. Faculty, in particular, must come to believe that knowledge management programs will enhance their academic activity. Faculty must also perceive that their investment in knowledge management will lead to the attainment of personal as well as organizational goals. IT personnel can help in this process by advocating for knowledge management projects, by directing IT resources to support appropriate ones, and by demonstrating their accountability to institutional leaders and to faculty. As learning organizations, institutions will recognize the value of knowledge management.
2. Training and practice for knowledge management projects must be provided. Trained and supported knowledge management participants are the key to successful organizational learning and the eventual adoption of knowledge management across the institution. When knowledge management projects involve technology, scholars and support personnel will need to be trained in the use of that technology. IT personnel can provide support for this process either through direct training or train the trainers programs.
3. Knowledge management projects must use existing data sources first. No one is eager to enter data twice. Redundant data is both useless and expensive. As frequent keepers of data warehouse and data malls, IT personnel will be critical for identifying and using explicit data throughout the institution. Given their institution-wide presence, IT personnel are in a position to purpose effective means of identifying, obtaining, and using tacit knowledge in knowledge management projects.
4. Knowledge management must relates to personal and unit goals and be applied in that level. IT personnel should help ensure that projects address immediate needs of individuals and units as well as any "big pictures" of the

organization. Reward system for individuals and unit must recognize effort to make the institution more effective and accountable through the appropriate use of knowledge. Scholars who see a direct connection between their academic interest and knowledge management projects are more likely to support them.

5. Knowledge management will likely work better in learning organizations where knowledge sharing and collaboration are the norm. Given the collaborative nature of their works, IT practitioners are an excellent position to influence the adoption of learning organization principles throughout an institution. IT practitioners can lead by examples. Adopting learning organization principles has the advantage of reinforcing the IT role throughout the institution while simultaneously increasing knowledge management learning.
6. As knowledge management reaches a critical mass, overall coordination is required. Some entity must have authority and assume responsibility to direct resources, reduce redundancy, share best practice, and assess result. Inevitably, IT personnel will be involved as knowledge management leaders and participants.
7. Fundamental changes in organizational philosophy and practice, like knowledge management, are evolutionary and take time to develop. IT personnel must develop a taste for strategy and accommodation if knowledge management is to success in helping institutions of higher education learn to demonstrate effectiveness and accountability.

By ensuring that these factors exist at their institutions, IT practitioners can help the academy learn to manage knowledge. The resulting organizational accountability and effectiveness will benefit everyone involved in higher education.

### Summary

While the concept of knowledge management has been examined tensively within business context, little is known about how the knowledge management process may benefit educational institutions. It is important to understand how knowledge management initiatives may affect higher education institutions, since universities such important role in the education process of future human resources. Thus, the same insights gained from studying knowledge management can lead business attain their missions and goals, may also be applicable to the academic context.

Universities have significant opportunities to apply knowledge management practices to support every part of their missions and goals. But, in applying knowledge management the university should considered the factors that hinder and support its success such as the culture, facilities, and members of the organizations.

## References

- Becher T. (1989); *Tribes and Territories*, Milton, Open University Press.
- Brooking, A. (1996); *Intellectual Capital: Core Assets for the 3<sup>rd</sup> Millenium*, International Thomson Business Press, London.
- Cohen (1998); *Towards a KM context on the KM and the Firm*, *California Management Review*, vol.40; no.2
- Cross & Baird (2000); *Technology is not enough: Implementation Performance by building organization memory*, *Sloan Management Review*; 41(3).
- Chodorow.S and Lymann.P (1998): *The Responsibility of University in the New Information Environment*, Butterworth, Heineman
- Davenport, T.H; De Long.DW & Beer.MC.(1998); *Successful KM Project*; *Sloan Management Review*. 39(2).
- Fleming, T. (1996), *Coping With a Revolution: Will The Internet Change Learning?* Lincoln University, Canterbury, New Zealand
- Gordon, George (2005); *Global, International, National and Local Dimensions of The Pressure For Reform of Higher Education*, The 5<sup>th</sup> SEAIR Proceedings.
- Hacket.B, (2000); *Beyond KM, New Ways to Work*
- Hadjinicola.MH & Soteriou.A.C (2006); *Factors Affecting Research Productivity of Production and Operations Management Groups*; *Journal of Applied Mathematics and Decision Sciences*, 2006
- Kennedy (1998); *To Change*. In P. Batmen & BL. Hawkins (Eds) *The Mirage Continuity: Reconfiguring Academic Information Resource for 21<sup>st</sup> Century*.
- Kidwell.J. (2001) *Applying Corporate KM Practice in Higher Education*; *Educause Quarterly* No.4.
- Laszio,K.C and Laszio,A. (2002) *Evolving Knowledge for Development: The Role of KM in a changing world*; *Journal of KM*, vol.6, No.4
- Prusak.L (1997); *Introduction to Knowledge in Organization*; Boston,MA, Butterworth-Heineman.
- Stoffe.C (1996); *The Emergence of Education and KM as Major Function of Digital Library*.
- Szulanski.J. (1996); *Exploring Internal Stickiness: Impediments to the Transfer of Best Practice within the Firm*; *Strategic Management Journal*, vol 17 Winter special issue.
- Sivan (1999); *Knowledge, Culture, Belief and Practice*; *Webnet Journal*, April-June, 1999.
- Sharobeam M.H. & Howard K.(2002) *Teaching Demands Versus Research Productivity*, *Journal of College Science Teaching*, Vol. 13, No.7, May 2002.
- Wind.J & Mein.J (1999); *Driving Change*; The Free Press, New York.
- Wig, K. M. (1999); *What Future KM users may expect*; *Journal of KM*
- UTAMA (2006) *Lectures attendance on Seminars*; *Business and Management Faculty*.