

Learning from the Greats: Identifying Three Knowledge Sharing Pillars to Direct Knowledge Management Initiatives in Higher Education Institutions

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In the ever-changing business environment, knowledge is regarded as a strategic asset for an organisation to sustain organisational competitive advantages. The ability to harness, integrate, disseminate, share, and apply knowledge in corporate strategies can contribute to desirable performance and results. In the higher education sector, management devises to instigate effective management of their knowledge assets in order to cope with the stiff competition and substantial demand on quality teaching, scholarly work and resources deployment. The findings from semi-structured, in-depth interviews with two Hong Kong knowledge-intensive organisations are summarised and thematised on three pertinent KM pillars, people, process, and technology (PPT) that constitute to effective KM practices and contribute to competitive advantages. The study provides an implication on how business PPT KM practices can be deployed and instilled in higher education institutions for their KM initiatives.

Key words: *Knowledge; Knowledge management; KM pillars; Higher education*

1 Introduction

Knowledge management (KM) comprises a set of processes through which firms identify, capture, disseminate and apply their collective expertise in order to achieve competitive advantage. KM leverages employees' capacities to learn, change and innovate, creating organisational competence that is invaluable in today's rapidly changing and hypercompetitive global marketplace. The knowledge-based view of a firm (Grant, 1996)

emphasised that knowledge is the most notable organisational resource that is hardly to be imitated and transferred. Thus, organisations with the capability to manage the knowledge assets can set apart and distinguish from others in the competitive and challenging environment (Barney, 1991; Yang and Chen, 2010; Cardoso et al., 2012; Nicotra et al., 2014). Therefore, Torres et al., (2018) asserted that “organisational performance is a knowledge-related issue”. In recent years, various scientific and governmental organisations intended to accelerate knowledge production to improve their own innovativeness and competitiveness (Butler, 2003; Zalewska-Kurek, 2016). In such a keen competitive period, knowledge production is actual competitive ‘weapons’ for organisations to acquire the best information, gain the first mover advantage and be the market leader (Torres et al., 2018).

Generally, knowledge is defined as a justified true belief that is closely linked to human action (Nonaka and Takeuchi, 2008). It is perceived as one of the core resources and antecedent for driving innovation in the paradigm of knowledge management (Alavi and Leidner, 2001; Beesley and Cooper, 2008). The multifaceted nature and dimensionality of knowledge, particularly the inextricable nature between tacit and explicit knowledge, have widely addressed in the KM extant literature (Chou, 2005; Alavi and Leidner, 2001). The effective ways to identify, acquire, unlock and store the shared knowledge from the organisational members into collective organisational knowledge repositories become the key agenda in order to derive desirable organisational outcomes (Alavi and Leidner, 2001; Choi and Lee, 2003; Johnston and Blumentritt 1998; Chu, 2016; Huang et al., 2011; Kulkarni et al., 2006). Organisations also initiate a series of knowledge management projects to capitalise and maximise the values of knowledge through sharing, diffusion, creation and realisation and transform into innovative ideas or services (Lin and Lee, 2012; Zack, 1999).

Therefore, in the present study, KM is defined as a set of processes through which firms identify, capture, disseminate and apply their collective expertise in order to achieve competitive advantage. The success of KM initiatives can leverage employees’ capacities to learn, change and innovate, creating organisational competences that improve organisational adaptation, competitiveness and survival under the hypercompetitive global marketplace (Del Giudice and Maggioni, 2014; Salojarvi et al. 2005; Torres et al., 2018). However, the strong initiatives, resources and efforts devoted by organisations to create, acquire, and harness knowledge assets to enhance organisational performance may not guarantee organisational success. The aim of the current study is to focus on the three major KM pillars: people, process, and technology (PPT) derived from the effective KM practices deployed by two renowned knowledge-intensive companies in Hong Kong through semi-structured, in-depth interviews (Del Giudice and Maggioni, 2014; Ruggles, 1998). We present our KM-related findings as guidelines for the higher education institutions (HEIs) to emulate deliberate KM practices. HEIs play a significant role in the knowledge-based economy and the examination of KM strategies in HEIs is a promising agenda (Laal, 2010). As learning organisations, they could generate preferred graduates, enlarge knowledge skills, foster creativity and innovation,

and promote effectively to the knowledge production. To a large extent, KM contributes to the future of social and economic development (Abdullah et al., 2005). Dhamdhare (2015) addressed that lifelong learning, internationalisation of higher education, new technologies, globalisation, managerialism and a paradigm change from teaching to learning which stimulate the urgent demand for KM in HEIs. To our best knowledge, a few research works were conducted in the adoption of KM within HEIs. This study provides the first attempt to give an implication on how business PPT KM practices can be deployed and instilled in HEIs for their KM initiatives.

The remainder of the paper is organised as follows: section 2 presents the notions of three KM from extant literature in the information systems, education and organisational learning domains. Then, we discuss the importance of KM in higher education in section 3. This is followed by the methodology of the semi-structured interviews in section 4. In section 5, the findings of the study are presented. After section 5, the implications of how HEIs can deploy their knowledge management initiatives are discussed in section 6. The conclusion is shown in section 7.

2 Three pillars of knowledge management

2.1 The people pillar

Knowledge management involves individuals at every organisational level, from senior-most to junior-most personnel. In this study, we examined two groups: top management and knowledge workers, who play key roles in driving KM initiatives. Typically, top managers champion the acquisition and creation of knowledge assets, provide strategic leadership in promoting KM through a rewards-based system, and more broadly oversee the diffusion of KM initiatives throughout their organisations (Lin, 2007; Pillani, 2008). Knowledge workers, who manage the technologies that support KM initiatives, play a critical role as they provide knowledge competencies that influence the degree of success or failure of any KM program (Huang et al., 2011; Ruggles, 1998). Knowledge workers operate in groups and develop social settings or cultures that can make all the difference in whether or not their organisations adopt KM initiatives smoothly or resist them during implementation.

2.2 The process pillar

The deliberated KM process enable organisations to identify, store, diffuse and generate knowledge and ultimately leverage knowledge assets to create a strategic advantage (Lee and Choi, 2003; Torret et al., 2018). Employees can identify and acquire knowledge from different functional departments, elucidate knowledge in comprehensible formats and disseminate to other organisational members (Ainissyifa, 2012). Valuable knowledge, skills and competencies are documented and stored in knowledge repositories that assume a variety of

forms (including employees' minds). Employees can also access and share pertinent knowledge from the structured documentation to carry out organisational tasks. They can combine and assimilate new knowledge and reconfigure with their existing knowledge in order to generate more new innovative ideas (Chan 2017).

2.3 The technology pillar

Information and communication technologies (ICT) facilitate rapid knowledge flow and exchange through connecting different employees within organisations (organisation-specific intranets) and communicating with different organisations boundlessly (i.e., the Internet). Organisations that invest in ICT and make ICT-related services readily available to their employees should be more successful when implementing KM projects (Moffett and Hinds, 2010). Knowledge networks, which include the use of groupware by virtual communities, benefit the KM processes. ICTs can encourage employees with a range of technology adoption skills to meet their KM needs, for example by enabling employees to unlock tacit knowledge and convert it into explicit formats (Kulkarni et al., 2006). Online databases represent another important source of acquired knowledge. All these ICT-related tools facilitate the exchange of ideas or competencies for collaboration. Beyond ICTs, a culture of social cohesion and reciprocity that encourages open discourse benefits sustained KM growth.

3. WHY KM in higher education

In Hong Kong, the waves of educational reforms (e.g., a 3-year senior secondary and 4-year undergraduate academic system) and the dramatical reduction of public funding to self-financing HEIs heighten *stiff inter-institutional competition for quality teaching and research*. Up to now, the HKSAR government takes a minimal role to enable the parallel development of self-financing post-secondary and publicly-funded education sectors. Eventually, self-financing HEIs encounter relatively severe situations without strong HKSAR government support. In doing so, management of the self-financing HEIs commit to use “managerialism” that entails a series of beliefs, operating techniques and practices in commercial organisations, and apply in educational contexts for effective functioning and performance (Deem, 2001; Pollitt, 1993; Yuen and Ho (2007, p. 551). Managerialism in higher education has been well documented starting from 2000 (Schapper and Mayson, 2005; Trowler, 2010; Hyde et al., 2013). Under managerialism, HEIs incline towards shifting operation from a collegial to a managerial model, where academics experience substantial transformation from communities of scholars to workplaces in order to pursue desirable performance in research, teaching and services (Dee and Leisyte, 2017). The emergence of managerialism has created a remarkable impact on HEIs in such approaches as competition, standards, excellence, economy, accountability, quality, efficiency, effectiveness, maximising

resource allocation and cultivating a performativity culture (Teelken, 2012; White et al., 2011).

HEIs are perceived as knowledge-intensive organisations where management has a strong desire to leverage the knowledge assets ingrained in their employees through storage, sharing and creation (Devi Ramachandran et al., 2009; Ho et al., 2008). Dhamdhare (2015, pp.169) also described “KM is especially important for organisations, comprised of experts where success depends upon generation, utilisation and uniqueness of the knowledge base. It would seem to be appropriate to consider higher educational institutions as organisations comprised of experts who contribute to knowledge base”. Furthermore, the HEIs are devoted to manage the knowledge assets in order to deliver more efficient, effective and excellent performances that can fulfil with socio-economic demand and quality education value for money and fitness to purposes. The extant literature of KM in business addressed the pertinent factors affecting the KM effectiveness (Wasko and Faraj, 2005), while the studies of KM on HEIs, particularly those self-financing one are scant (Chen et al., 2009; Rodríguez-Gómez and Gairin, 2015)

4 Methods

Two knowledge-intensive organisations in Hong Kong were invited to delineate their KM practices. Company A is one of the public utility service providers and company B is one of the service providers in the hospitality and tourism fields. We conducted semi-structured in-depth interviews with senior managers/executives and KM teams at each company. Those senior managers were also key informants on organisational KM practices, with a clear understanding of and active engagement in organisational development. Due to the personal confidentiality concern, all interviewees’ personal particulars will not be disclosed in this study.

Two weeks before the interview, the key informants were provided with a number of interview questions such as perception of KM, the stage of development of KM in the organisation. In doing so, it enables the interviewees to understand the research background, purposes and design. Each interview lasted approximately two hours. During the interview, senior managers in company A shared with the researchers some corporate documents and presentation slides related to the evolution of organisational KM. In company B, the senior managers provided researchers a site tour of important KM infrastructure proposed by their employees. This study employed a qualitative method as it presented a comprehensive understanding of human behaviour and the rationale behind the control of such behaviour (Clandinin and Connelly, 2000).



5 Findings

The key informants concurred that knowledge is of central importance while offering somewhat divergent perspectives on the three pillars of KM, people, process and technology. Both informants observed that knowledge is crucial to an organisation's success in an increasingly competitive business environment. They both suggested that organisations with a strong KM vision and dedication to strategic growth that also involve knowledge workers intimately in KM processes, should experience success with KM.

On the other hand, in connection with their respective market context and business nature, the respondents had different views regarding the relative significance of the three KM pillars. Company A stated that their team perceived the three KM pillars have equal weighting for visible results, while company B placed people as the most important pillar, compared with the other two KM pillars, process and technology.

The key informants also illuminated their KM endeavours practised in their organisations. Comments with examples demonstrate the collective visions of their KM programs, milestones of KM development they had achieved, and factors that facilitate or inhibit KM effectiveness in their organisations. Table 1 detailed the three KM pillars of companies A and B.

Table 1 Knowledge Pillars in Company A and Company B

People Pillar (Top Management)
<ul style="list-style-type: none"> • Presented clear vision to leverage knowledge assets for organizational competitiveness • Demonstrated strong commitment to KM programs • Articulated strong dedication to and enthusiasm for KM programs • Designed incentive systems that closely align monetary and non-monetary rewards /perks for knowledge workers who engage in and contribute actively to KM programs • Maintained open-minded attitudes towards novel ideas created by employees across organizational levels
People Pillar (Knowledge Workers)
<ul style="list-style-type: none"> • Felt puzzled or being doubtful towards the ideas of managing knowledge • Resisted to share their knowledge with fear of losing one's power • Engaged in knowledge networking groups or sharing sessions improved their understanding towards KM • Explored new ideas from other knowledge workers through collaborative work
Process Pillar
<ul style="list-style-type: none"> • Active identification of knowledge sources at all organizational levels • Employees encouraged to externalize skills, ideas and competence from personal repositories by making tacit knowledge explicit • Promotion of employee knowledge-sharing that is assimilated as collective knowledge for organizational improvement • Source tacit knowledge from different sources, then, convert into explicit knowledge, document and organize it extensively • Empower process owners or knowledge workers to solicit and create new knowledge at various levels, integrated in business processes for improvement
Technology Pillar
<ul style="list-style-type: none"> • KM-related ICT system serves as an effective communication platform that arouses employees' attention • User-centered systems stimulate their needs and interests in acquiring and using knowledge, motivates them to engage in KM processes • Encouraged knowledge seekers to be one of the knowledge contributors and sharers through extensive recognition • Treat technology as a useful means of boosting such KM processes as identification, documentation, storage, retrieval and creation of knowledge for various applications

Management with solid experience in business reengineering and change management takes the initiative to champion of KM programs. They set a clear vision on the KM program and convey the essentials to employees that set a steadfast commitment to KM. As KM is novel to most employees, collegial and professional teamwork led by management steer the way in how to incorporate various KM processes in business workflow. In addition, they ponder and introduce attractive incentive systems to engage employees for positive endeavours required for knowledge management.

Employees expressed that they felt weird when they instigated in early stage of KM, such as sharing their knowledge to others as they had the prevailing perception that knowledge is power. Thereafter, they worked with the KM pioneers and understood the genuine importance and benefits from KM, thus relieving their stress and anxiety. The regular and frequent communication allows employees to strengthen trust and a mutual support relationship to build the shared repertoire of ideas. They explained that participating in the community of practices and mingling with other colleagues/ knowledge workers in other departments had reduced their puzzlement in KM. The monetary rewards are a direct drive while non-monetary rewards serve as valuable recognition to motivate their support for KM.

Management dedicated resources to set up special groups or community of practice that allowed members to socialise with different viewpoints or experience's and spark on new thinking. Regular meetings among members facilitated interaction where they could talk to each other and exchange ideas mutually. They attempted to tap into tacit knowledge that is rooted and resided in knowledge in the worker's mind. The knowledge held by individuals is codified into an explicit form and presented in a way that can be comprehended by others. The organisations also sourced useful knowledge from external stakeholders, such as the feedback from customers to improve the business process, or analysing the benchmarked practices from industrial competitors. With the adoption of KMS and information systems infrastructure, the sharing process is leveraged with ideas from knowledge and workers become visible in the organisation, and can be accessed by other knowledge seekers. Members of CoP could develop and propose new ideas to top management that streamlined the business process in order to improve efficiency or added values to customer services. Once the ideas were accepted as a buy-in project, the knowledge workers could implement these in organisations and foster their incentive to diffuse, create and internalise knowledge.

The management understands that mere investment in KM technology without understanding the users' perception and work practices cannot reap the benefits as expected. Both companies have deployed KM technology that are user-centred to manage their KM processes including identification, documentation, storage, and retrieval of codified knowledge. The KM systems can also provide effective communication platforms to connect different knowledge workers to share and collaborate at all levels. To invite more organisational members to engage in KM practices, training support was provided that can

help the novice or inactive KM members to remove fear towards change or being incompetent. In addition, there are KM forums listing the contemporary issues that arouse other's comments or scaffolding of new ideas. The search engines allowed knowledge seekers to access, learn, understand and explore relevant good practices, or insights for handling work procedures. Based on their trust and supportive relations among the KM workers, the companies also encouraged them to adopt face-to-face communication as the complement to social networking in KM systems.

6. Lesson from the Great as Guidelines for KM readiness

Our findings on the good KM practices of companies A and B enabled us to guide the HEIs to get ready for setting KM initiatives in a competitive environment.

6.1. People readiness

Management attitude towards adopting KM-related change serves as a barometer for steadfast commitment for organisational-wide KM endeavours (Rodríguez-Gómez and Gairín 2015). With strong vision and dedication from top management explicated in business strategy, HEIs management can put emphasis on KM initiatives, arrange and participate actively in KM-related seminars, workshops or face-to-face meetings, stay open-minded towards new ideas proposed by employees; a persuasive and supportive KM culture can be developed and cultivated (Ainissyifa 2012, Becerra-Fernandez and Leidner 2008) and employees become even more strongly motivated when implementing KM initiatives.

Al-Hakim and Hassan (2011) opined that managers are knowledge engineers to promote and create knowledge across different departments. They proposed a conceptual framework that delineated the significance of middle managers roles including analyst, intuitive and pragmatic for KM implementation, which directly affect innovation enhancement. The management in HEIs such as department heads can identify various explicit knowledge for collective projects (analyst), experiment new ideas through supporting colleagues to learn through trials and errors (intuitive), connect across different departments with their best practices to match with strategic opportunities (pragmatic).

For their part, knowledge workers are the primary agent to take charge of identification, externalisation and sharing of knowledge (Rodríguez-Gómez and Gairín 2015). In HEIs, educators must demonstrate trust, support and dedication when implementing KM processes. The early stages of a KM initiative may be fraught with obstacles, such as stressful teaching duties, skepticism of the rigidity of organisational structures of knowledge sharing and even fear of change to lose personal value after knowledge is shared with others. Thus, management could work closely with employees and identify committed groups of early adopters or steering groups to engage in KM endeavors. The interplay of knowledge

seekers and knowledge contributors can reinforce the KM process within organisations. Their experience, behavioural change and success stories are rudimentary of a supportive culture to overcome KM inhibitors.

In addition, rewards and recognition such as bonuses, job promotion and performance pledge can convey a positive signal affirming individual competence and contribution towards KM success. Management has to clarify expectations for research and teaching performance through explication of performance management standards. Other than individual-based rewards, team-based or service rewards are crucial and encourage cooperation among members who ponder knowledge sharing behaviours as instrumental in achieving the team-based outcomes (Bartol and Srivastava 2002).

6.2 Process readiness

KM processes include an array of deliberated efforts that organisational members can identify, organise, archive, transfer and apply knowledge relevant to different organisational decisions and tasks. Educators in HEIs performs knowledge-related tasks though not all of them are aware or realise it (Laal, 2011). Identification of valuable knowledge sources is critical. Therefore, management may initiate formal and informal KM processes that encourage frequent communication and exchange among employees. For example, casual conversations in the office hallway, departmental meals or gatherings, and regular team meetings on various work issues. Employees at all levels, regardless of their roles and tenure (executive, managerial, clerical, etc.), can foster relationship-building and identify both tacit and explicit knowledge from daily teaching practices, lessons learned from projects or experience from academic services.

HEIs can provide regular training sessions or sharing platforms where educators are encouraged to present their innovative methods such as blended learning or application of research findings to improve learning activities. The useful knowledge can be achieved, captured and indexed systematically through multi-media media such as documents or videos. Organisational members can access easily physical knowledge sources or e-enabled repositories such as websites and databases and enable them to combine and reconfigure with their current ideas or skills into explicit knowledge and transform them into actionable teaching pedagogies (Collins and Deek, 2012).

Projects involving members from different units encourage collaborative discussion, joint production and creation of knowledge. For example, curriculum development of general education subjects allows educators to establish a common lexicon and generate new understandings of others. Management can also provide funding for research and scholarly activities that inspire educators to identify common interests, roll out or articulate their ideas and combine the resulting knowledge with the stock of knowledge stored in the minds of

other organisational employees, and exchange profound ideas for quality teaching (Harris, 2008). Coupled with the strong culture, trust and reciprocal relation among organisational members, educators can initiate new innovation.

6.3 Technology readiness

It is generally agreed that knowledge management systems play an immersive role as they enable organisational members to find, share and reuse relevant information and resources for desirable organisational performance. Top management can also track and evaluate employees who contribute most actively and most frequently to organisation-wide KM initiatives, allowing them to reward and recognise the relevant employees for more desirable KM outcomes. However, it should be noted that the employment of KMS does not guarantee KM success; the reluctance to change, trust among employees, perceived difficulty of using electronic knowledge repositories have negative impacts on KM initiatives (Kankanhalli et al., 2005; McDermott, 1999).

Effective alignment of the technology deployed in conjunction with KM processes promotes KM implementation (Ranjan, 2011). The advent of KM-related technology has contributed to foster and facilitate employees to share, diffuse, transfer, utilise and create knowledge, ultimately enhancing organisational capacity in KM implementation (Lee and Roth, 2009).

HEIs can designate an information technology support unit to offer on-line and off-line training of KM applications that enable employees to learn progressively and flexibly at either individual or team-based levels. Educators can utilise user-friendly technology to access and assimilate various good practices in teaching or research works to enrich their current practices.

Aside from its role as a process lubricant, technology connects people in dialogue and socialisation that are important for effective KM. It helps to overcome the barriers in geographical boundaries, time and distance to connect knowledge seekers and knowledge contributors to exchange tacit and explicit knowledge effectively. At a more advanced level, technology can aid in the development of communities of practice, through exposure to common domains of problems and pursuit of solutions, sharing their competence and learning from others, ultimately developing newer or deeper levels of knowledge for desirable organisational outcomes (Lee and Roth 2009, Rodríguez-Gómez and Gairín, 2015). In terms of the 'backend', technology can effectively and reliably support KM processes such as storage, retrieval, and documentation of knowledge in reliable and accessible KM repository for all employees.



7. Conclusion

Our findings and analysis from the key informants of both knowledge-intensive organisations in Hong Kong yielded the notion that effective deployment of people, process and technology are critical for success. In the context of higher education, the dynamic change and stiff competition have urged a strong force on effective management of knowledge resources resided in individual minds and organisational process and repositories. The lessons of KM pillars readiness provide a useful guideline for HEIs to position their KM initiatives. When all employees in an organisation are clearly aware of the champions of a KM initiative, it helps create a framework for KM processes that facilitate the use and creation of ideas. The adoption of KM technology supports collaborative knowledge transformation and institutional improvement of teaching practices and academic services across the academic departments. This study provides a useful guidance for the educators, policymakers, industrial practitioners to design and use business PPT KM practices to deploy and instill in HEIs.

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