KM CAPABILITIES AND THE MODERATING EFFECT OF INTERPERSONAL TRUST ON KM EFFECTIVENESS: A STUDY IN HONG KONG POST-SECONDARY EDUCATION SECTOR

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Abstract

This study evaluates the effects of KM infrastructure and KM processes on the organization’s KM effectiveness. The moderating effect of interpersonal trust on the relationship between KM processes and KM effectiveness is also explored. KM infrastructure has three sub-constructs: KM technology, KM structure, and KM culture; whereas the four sub-constructs forming KM processes are: knowledge acquisition, knowledge conversion, knowledge application, and knowledge protection. Survey data were collected from teaching staff of post-secondary institutions in Hong Kong. PLS were used for testing the measurement and structural models. The results support the hypotheses and are consistent with the literature. This research contributes to the literature by empirically validating the proposed research model in educational setting.

Keywords: Knowledge management, KM capabilities, KM effectiveness, Interpersonal trust, Post-secondary education
1. INTRODUCTION

Given the trend of rapidly changing environment coupled with a series of education reforms in the post-secondary education sector in Hong Kong, it is increasingly important for institutions to maintain sustainable competitive edge by improving their services offered, searching for new market niches, raising overall operational efficiency, and building up their own effective work teams. A number of studies have shown that effective knowledge management (KM) leads to better decision-making capabilities, reduced product development cycle time (for example, curriculum development and research), improved academic and administrative services, and reduced costs (Hamid, 2008). In view of the perceived benefits, educators have started bringing in the concepts of KM and exploring how it may be applied to their institutions. Trust is also recognized as a prominent requirement for persistently successful organizational performance in dynamic knowledge economy (Aubé et al., 2007). If knowledge workers are reluctant to trust each other, they are not likely to share and exchange knowledge. Without trust, KM will fail, regardless of how thoroughly it is supported by the technology infrastructure and knowledge transfer processes (Ribière and Tuggle, 2005).

Thus, the context has prompted the interest in pursuing this study, i.e. whether institutions have adequate KM capabilities to gear up their KM effectiveness. This study examines the relationships of KM infrastructure, KM processes and interpersonal trust on KM effectiveness in post-secondary education sector. Specifically, this paper addresses the research questions: (i) Is KM infrastructure a significant determinant of KM Effectiveness? (ii) Is KM processes a significant determinant of KM effectiveness? and (iii) Does the relationship of KM processes and KM effectiveness vary with the existence of interpersonal trust?

2. LITERATURE REVIEW

A generic KM definition used by the Organization for Economic Co-operation and Development (2003) is adapted in this study: ‘Knowledge management involves any systematic activity related to capture, use and sharing of knowledge by the organization’ (p.170). Contemporarily, KM initiatives seek to achieve at least one of these three aims: (1) to make knowledge visible and show the role of knowledge in an organization; (2) to develop a knowledge-intensive culture by encouraging and aggregating behaviours such as knowledge sharing (as opposed to hoarding) and proactively seeking and offering knowledge; and (3) to build a knowledge infrastructure – not only a technical system, but a web of connections among people given space, time, tools, and encouragement to interact and collaborate (Davenport and Prusak, 1998). There are more than one approaches or school of thoughts for KM but it has been generally accepted that an organization will capitalize effectively on its knowledge resources only when supportive infrastructure capabilities, targeted motivators and incentives are in place (Alavi and Leidner, 2001; Earl, 2001).

Recent studies indicate that effective KM is resulted from the combination of: (i) integrated technical infrastructure including network, repositories and computer; (ii) appropriate organizational culture and structure; and (iii) the willingness of employees to create, share and apply knowledge (Alavi and Leidner, 2001; Silva et al., 2007). On the contrary, insufficient organizational infrastructure (according to Gold et al., 2001, it is composed of technology, structure and culture) and inappropriate diffusion processes (according to Gold et al., 2001, it refers to processes required to acquire, convert, apply and protect knowledge) decrease the value of KM and disappoint employees (Choy et al., 2006; Wickramasinghe, 2007). Moreover, recent organizational research recognizes the importance of interpersonal trust in promoting individual and organizational effectiveness (Bryk and Schneider,
According to Prusak and Cohen (2001), high levels of employee trust can lead to better knowledge sharing, shared goals, and lower transaction costs. Andrews and Delahaye (2000) also find that in the absence of trust, formal knowledge-sharing practices are insufficient to encourage individuals to share knowledge with others in the same work environment.

However, having review studies on KM effectiveness in the past decade, it appears that little empirical study is found in adopting a holistic approach in investigating KM effectiveness from the perspectives of its infrastructure, processes and interpersonal trust. Moreover, majority of KM studies are conducted in business sector, few have been done in educational setting although there has been increasing awareness and discussion about KM in education institutions (Levy, 2007). This study therefore undertakes a quantitative study with a broader and comprehensive focus with the hope of contributing to fill the empirical gaps.

3 RESEARCH MODEL AND HYPOTHESES

This study is to examine the effects of KM infrastructure, KM processes and interpersonal trust on KM effectiveness. KM infrastructure and KM processes are second-order constructs. KM infrastructure consists of three first-order sub-constructs, namely KM technology, KM structure, and KM culture; whereas KM processes has four first-order sub-constructs, namely knowledge acquisition, knowledge conversion, knowledge application, and knowledge protection. The proposed model in Figure 1 is basically drawn on work of Gold et al. (2001) and Cook and Wall (1980).

Organization’s KM effectiveness can be referred to whether the organization receives and understands the knowledge need to perform its tasks. The perceptual measure of KM effectiveness introduced by Sabherwal and Becerra-Fernandez (2003) is adopted in this study.

KM infrastructure is composed of KM technology, KM structure, and KM culture. Technology is a KM capability which enables and constrains the flow of knowledge and information across time and space (Leonardi et al., 2008). Technology should not only enhance the efficiency, but also broaden the scope as well as allow for flexibility of the integration of fragmented flows of information and knowledge in an organization (Silva et al., 2007). In her study with thirty teachers of six schools in Singapore, Meenakshi (2002) points out that the benefits of the use of technology recognized are that
it permits quick dissemination of information and for storage and retrieval anytime anywhere and facilitates teachers to connect to resources globally. Highest usage was found in email (for dissemination of information), internet (to find resources and new ideas), intranet (to communicate and use as common workspace for storage and retrieval) and online communities (to keep abreast of latest developments in education field). Organizational structure is important in leveraging technological architecture. It may refer to rules, policies, hierarchy of reporting relationships, incentive systems, and departmental boundaries that organize tasks within the firm (Kanawattanachai and Yoo, 2007; Kulkarni et al., 2007).

It is important that organizational structures be designed for flexibility so that they encourage sharing and collaboration across boundaries within the organization. Along with policy and procedures, an organization’s system of rewards can stimulate participation in knowledge sharing systems but it cannot be too trivial (Kulkarni et al., 2007). It has to be long-term in orientation and tie in with the general evaluation and compensation structure. Yahya and Goh (2002), in their survey with 300 managerial level employees in Malaysia, find that a knowledge organization requires a different HR approach than the non-knowledge organization. In terms of employee development, the focus should be placed on achieving quality, creativity, leadership, and problem solving skills. The design of compensation and reward system should be on promoting group performance, knowledge sharing, and innovative thinking. The performance appraisal must be the base of evaluation of employee’s KM practices and an input for directing KM efforts.

IT tools designed to facilitate knowledge creation, capture, representation and sharing are available, but their efficient use and acceptance by knowledge workers remain constrained by organizational culture (Harrison, 2005). Gold et al. (2001) consider that organization’s learning culture can be shaped through corporate vision along with a system of corporate values. The corporate vision provides employees a clear organizational purpose and prompts the necessary changes in the organization so that it can achieve its desired future goals (Nonaka and Takeuchi, 1995). An explicitly articulated and communicated organization vision, including its value statements, determines the types of knowledge and their related activities that they are encouraged and tolerated; and subsequently can engender a sense of involvement and contribution among employees that encourage effective KM processes to occur (Leonard, 1995).

The above discussions lead us to the conclusion that higher level of KM capabilities in technology, structure and culture will increase the organization’s effectiveness in managing knowledge. Since organizational technology, structure and culture constructs are additive of KM infrastructure, the following hypothesis is proposed:

**H1: Higher level in KM infrastructure will lead to higher level in KM effectiveness.**

Despite the fact the KM processes may be deliberate or emergent, Gold et al. (2001) defines KM process capability as the existence of established procedures for acquiring, converting, applying and protecting knowledge. The four independent variables grouped under KM processes are knowledge acquisition, knowledge conversion, knowledge application and knowledge protection. Knowledge acquisition refers to both the seeking of entirely new knowledge as well as the creation of new knowledge out of existing knowledge through collaboration between employees and between business partners (Gold et al., 2001). Whereas imitation of organizational capacity can be critical to an organization’s success, tacit knowledge of line employees must not be overlooked (Kim et al., 2006). Nonaka and Takeuchi (1995) depict a spiral process of knowledge creation (SECI model) whereby individuals in organizations seek and generate knowledge. Tacit knowledge is acquired through socialization and becomes explicit knowledge or concepts through externalization. Explicit
knowledge can then be combined in the form of databases or repositories, which in turn becomes individuals’ tacit knowledge though internalization.

Knowledge conversion refers to those activities focus on making existing knowledge useful and up-to-date (Gold et al., 2001). Examples of these activities are an organization’s ability to organize, integrate, structure, or distribute knowledge (Hall and Andriani, 2002). An organization should develop common representation standards for structuring or integrating its knowledge. Otherwise, non-consistency of knowledge would exist and would make the asset difficult to effectively manage (Gold et al., 2001). Moreover, knowledge about a particular subject may reside in different departments or systems within the organization. Effectively integrating this knowledge enhances consistent representation, and improves efficiency by eliminating excessive versions (Hall and Andriani, 2002). Some commonly use means for facilitating integration are rules and directives, sequencing, routines, and group problem solving and decision-making (Gold et al., 2001).

Regarding knowledge application, organizations need to explore and exploit knowledge. While exploration provides the knowledge capital to propel a business into new niches, exploitation provides the financial capital to fuel successive rounds of innovation and exploration (Al-Alawi et al., 2007). There is no point of accumulating knowledge without using it. On less pecuniary terms, Leonard and Sensiper (1998) suggest three major ways tacit knowledge is exercised in the service of innovation: (1) problem solving, (2) problem finding, and (3) prediction and anticipation. In other words, the use of knowledge can help to adjust an organization’s strategic direction, solve new problems, and improve efficiency. It is equally important for institutions to have established procedures to enhance usage of knowledge acquired not only at classroom (individual) level, but also across subject/work teams, as well as strategically for sustaining the ‘competitiveness’ of the institution as a whole.

Knowledge protection refers to rules and procedures, etc. designed to prevent inappropriate or illegal use of knowledge or theft (Gold et al., 2001). While certain protection mechanism can be built into the technology infrastructure, other forms of protecting intellectual property should also be established to make employees feel ‘safe’ to share their knowledge (Hansen et al., 1999). Patenting, licensing, restricted access etc., are some of the more commonly used means for knowledge protection.

H2: Higher level in KM processes will to higher level in KM effectiveness.

Recent organizational research suggests the importance of interpersonal trust relationships for promoting individual and organizational effectiveness (Smith et al., 2007). Cook and Wall (1980) cite trust between individuals and groups within an organization as a significant factor in terms of the long-term stability of the organization and the well-being of its employees. Studies have confirmed that interpersonal trust is associated with organizational variables such as quality of communication, performance, citizenship behavior, problem solving, individual risk taking, and cooperation (Hamid, 2008). It is therefore envisaged that interpersonal trust will have a positive impact on the organization’s KM processes for implementing and sustaining a knowledge-sharing culture that facilitates knowledge activities, and subsequently enhance the KM effectiveness in the organization. Interpersonal trust is multi-faceted and has been variously defined. A commonly held view in intra-organization context is ‘an expectancy held by an individual…that the word…or written statement of another individual…that the word…or written statement of another individual can be relied on’ (Rotter, 1967, p.651). In addition, interpersonal trust can help the knowledge protection process. Although companies can protect their knowledge by copyrights, patents, trademarks, incentive system or job design, the effect is still limited (Gold et al., 2001). In a highly trusted organization, the opportunistic behaviour of leaking knowledge to outsider will be reduced (Kale et al., 2000).
better knowledge protection, individuals and organizations can devote their time and energy to innovation, competence improvement and trying to become more generally effective.

In the context of education, research has also indicated that interpersonal trust represents a critical element in the development of healthy and purposefully directed institutional environments (Smith and Birney, 2005). For instance, past research in public schools has found that high levels of faculty trust among colleagues, clients, and administrators improve institutional efficiency and productivity (Hoy et al., 2002). Furthermore, trust in institutional leaders has been found to influence job satisfaction, affect subordinate commitment and citizenship behavior, and lower turnover rates (Smith et al., 2007). It is thus conjectured that interpersonal trust is able to leverage an institution’s knowledge processes capabilities in enhancing its effectiveness in managing knowledge.

**H3: Interpersonal Trust will moderate the relationship between KM processes and KM effectiveness.**

### 4 RESEARCH METHODOLGY

As one of the research objectives is to address KM capabilities issues in Hong Kong’s post-secondary sector, a cross-sectional, field study is conducted. The unit of analysis is individual, i.e. teaching staff of post-secondary institutions offering self-financed sub-degree programmes in Hong Kong. Surveys are appropriate for research questions about self-reported beliefs or behaviours (Neuman, 2003).

#### 4.1 Sample and Sampling Frame

The key informants for this study are individuals who are capable to answer questions related to the institution’s KM effectiveness and its capabilities. In educational setting, teaching staff members are considered appropriate because they use knowledge for accomplishment of their tasks and they can also provide commentary of the organization’s knowledge activities. In addition, the work nature of teaching staff members fulfills the definition of “competent people” articulated by Sveiby (2001). The sampling frame of the study was teaching staff of two major self-financed sub-degree programmes providers in Hong Kong. The rationales for selection were (i) they are the key providers of the sub-degree programmes; (ii) their scales of operation, organization structure, and source of funding are similar; and (iii) most important, they showed willingness to participate in the study. Approval from institutions was sought for accessing their teaching staff for data collection.

#### 4.2 Instrument

All variables in this study were measured using multiple-item scales adapted from previous empirical studies. Some instrument items were modified and enhanced to better suit the purpose and context of this study. The questionnaire used the 7-point Likert scale (1 = strongly disagree, 7 = strongly agree). Information on respondents’ gender, age, educational attainment, position held, teaching experience, years in current institution, institution type and year of establishment was also collected for checking systematic bias in the sample. The results showed that the respondents did not deviate significantly in terms of gender, age, position held, and working experience. The demographic profile of respondents is well aligned with the characteristics of institutions in the sub-degree sector, and is likely to be well-informed of related activities within their institutions.

An English-Chinese bilingual questionnaire was developed with the view to enhance the respondents’ comprehensibility of the instrument. Back-translation was conducted to minimize translation error. A pilot test was conducted with several teaching staff of other post-secondary institution and their responses were scrutinized with a view to further refining the wording and sequencing of the questions.
4.3 Data collection

In this study, questionnaires were distributed to all full-time teaching staff of the two institutions, including principal lecturers, senior lecturers, lecturers, assistant lecturers, and teaching assistants. Their names, locations, telephone numbers and email addresses were obtained from their institutions’ websites. It was about 540 teaching staff in the two institutions in May when the survey was conducting. One month’s time was allowed for the return of the completed questionnaire. To stimulate the response rate, it had been stated that a donation of HK$10 per valid return would be made to the dedicated charitable organization. The survey was completed in end June. Among the 157 returns from the two institutions, 148 were usable. The effective response rate was 27%.

4.4 Data Analysis

Two statistical tools, SPSS and PLS, were used in data analysis. The data analysis procedure in this study consisted of two stages: confirmatory factor analysis (CFA) was performed to assess the measurement model; and structural equation modelling (SEM) analysis was used to examine the overall relationships among KM Infrastructure, KM Processes, Interpersonal Trust, and KM Effectiveness.

4.4.1 Measurement Model Analysis

Although constructs used in this study have been validated in the previous studies, PLS technique was used to determine convergent validity, internal consistency and discriminant validity of the measurement model (Wixom and Watson, 2001).

Construct Reliability. Results showed that all values of composite reliability are above 0.81, and the square roots of AVEs are above 0.72, which exceed the recommended thresholds of 0.7 and 0.5 (Hair et al., 2006). This suggests acceptable construct reliability.

Convergent Validity. It is considered adequate when: (1) factor loadings are significant (e.g. t-value >1.96 at 0.05 level of significance, or t-value >2.56 at 0.01 level of significance) and greater than 0.5 (Wixom and Watson, 2001); and (2) AVE of each latent variable is above 0.5 (Fornell and Larcker, 1981). Results showed that all variables have factor loadings greater than 0.5, the t-values are all significant at 0.01 level of significance (t-value >2.56). Similarly, AVE of each latent variable is above 0.5, which indicate adequate convergent validity.

Discriminant Validity. The results show that the diagonal elements were greater than the off-diagonal elements in the corresponding rows and columns for all cases and fulfilled the thresholds recommended by Fornell and Larcker (1981). This suggests satisfactory discriminant validity among the constructs.

Assessment of Non-response Bias. The difference of response time may infer the risk of non-response bias. In this study, the 148 survey respondents were divided into early and late groups. t-tests were performed on the responses of these two groups. The results indicated that none of the items were found to be statistically significant (p>0.05, two-tail test) between these two groups of respondents. It suggests that non-response may not be a problem to the extent that the late respondents represent the opinions of respondents (Lai et al., 2002).
4.4.2  Structural Model Assessment

As a second-order model is adopted in this study, the structural model assessment is composed of two stages: (1) to evaluate the structure of the second-order factors, and (2) to test hypotheses based on the path coefficients and $R^2$.

Table1 shows that the correlation coefficients are significant at 0.01 level ($t>2.56$) for all the first-order sub-constructs forming KM Infrastructure and KM Processes respectively. This means that KM Technology, KM Structure, and KM Culture are good representatives of KM Infrastructure; and Knowledge Acquisition, Knowledge Conversion, Knowledge Application and Knowledge Protection are good predictors of KM Processes.

<table>
<thead>
<tr>
<th>2nd-order Factor</th>
<th>1st-order Factor</th>
<th>Weights</th>
<th>t-statistics</th>
<th>Significant</th>
</tr>
</thead>
<tbody>
<tr>
<td>KM infrastructure</td>
<td>KM Technology</td>
<td>0.246</td>
<td>16.00</td>
<td>Yes (at 0.01 level)</td>
</tr>
<tr>
<td></td>
<td>KM Structure</td>
<td>0.355</td>
<td>21.88</td>
<td>Yes (at 0.01 level)</td>
</tr>
<tr>
<td></td>
<td>KM Culture</td>
<td>0.490</td>
<td>32.04</td>
<td>Yes (at 0.01 level)</td>
</tr>
<tr>
<td>KM Processes</td>
<td>Knowledge Acquisition</td>
<td>0.175</td>
<td>28.14</td>
<td>Yes (at 0.01 level)</td>
</tr>
<tr>
<td></td>
<td>Knowledge Conversion</td>
<td>0.203</td>
<td>24.71</td>
<td>Yes (at 0.01 level)</td>
</tr>
<tr>
<td></td>
<td>Knowledge Application</td>
<td>0.480</td>
<td>30.64</td>
<td>Yes (at 0.01 level)</td>
</tr>
<tr>
<td></td>
<td>Knowledge Protection</td>
<td>0.232</td>
<td>14.38</td>
<td>Yes (at 0.01 level)</td>
</tr>
</tbody>
</table>

Table 1.  Structural Statistics of the Second-order Factors

As can be seen from Table 2 and Figure 2 that, the path coefficient from KM Infrastructure to the dependent variable KM Effectiveness is significant at 0.01 level ($t$-value=2.99, >2.33). This supports H1 that higher level in KM Infrastructure will lead to higher level in KM Effectiveness. H2 is also supported since the path coefficient of KM Processes to KM Effectiveness is significant at 0.05 level ($t$-value=1.81, >1.65). H3, the moderating effect of Interpersonal Trust on the relationship between KM Processes and KM Effectiveness is confirmed since the $p$-values of the path coefficient is lower than 0.01 ($t$-value=2.37, >2.33). Furthermore, the $R^2$ value for KM Effectiveness in the structural model is 0.70. This means 70% of the variance in KM Effectiveness can be explained by KM Infrastructure, KM Processes and the moderating effect of Interpersonal Trust. As H3 (i.e. the moderating effect of Interpersonal Trust on the relationship between KM Processes and KM Effectiveness) is not rejected, it is desirable and meaningful to evaluate the effect size of the moderator. After performing further analysis, the computed $f^2$ value is 0.14, which is regarded as medium effect size.

<table>
<thead>
<tr>
<th>Hypotheses</th>
<th>t-statistics$^{(note)}$</th>
<th>Significant</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1: Higher level in <strong>KM Infrastructure</strong> will lead to higher level in <strong>KM Effectiveness</strong></td>
<td>2.99**</td>
<td>Yes (at 0.01 level)</td>
</tr>
<tr>
<td>H2: Higher level in <strong>KM Processes</strong> will lead to higher level in <strong>KM Effectiveness</strong></td>
<td>1.81*</td>
<td>Yes (at 0.05 level)</td>
</tr>
<tr>
<td>H3: <strong>Interpersonal Trust</strong> will moderate the relationship between <strong>KM Processes and KM Effectiveness</strong></td>
<td>2.37**</td>
<td>Yes (at 0.01 level)</td>
</tr>
</tbody>
</table>

Note: * $p<0.05$, one-tailed test;  **$p<0.01$, one-tailed test.

Table 2.  Path Coefficients of Second-order Constructs
CONCLUDING REMARKS AND IMPLICATIONS

Motivated by the growing importance of effective KM in post-secondary education sector and the gaps in the empirical research, this study evaluates the relationships of KM Infrastructure and KM Processes on KM Effectiveness, and the moderating effect of Interpersonal Trust on the relationship between KM Processes and KM Effectiveness in educational context. The results support that the measurement model was reliable and valid. Findings concluded that all the three hypotheses are statistically supported, i.e. higher level in KM Infrastructure will lead to higher level in KM Effectiveness; higher level in KM Processes will lead to higher level in KM Effectiveness; and Interpersonal Trust will moderate the relationship between KM Processes and KM Effectiveness with medium effect size. The results are consistent with the literature.

There are a number of theoretical implications of this study. First, this study adopts a holistic approach by building on an existing model to investigate the effects of KM Infrastructure, KM Processes and Interpersonal Trust on KM Effectiveness; and uses established constructs for the measures of both dependent and independent variables. As such, this study contributes to the literature on validating the model and the measurement scales therein. It also provides empirical evidence for the causal relationship between these constructs. Moreover, the survey was conducted in sub-degree sector and provided results which are consistent with the literature that KM Infrastructure, KM Processes and Interpersonal Trust are the key capabilities for KM Effectiveness. It is believed that the findings contribute to the literature by reinforcing the roles of KM Infrastructure, KM Processes and Interpersonal Trust in KM Effectiveness in educational context, in which similar empirical study is lacked (Silva and Hirscheim, 2007).

This study also yields managerial implications for practice. First, the findings could possibly help institutions further enhance their KM Effectiveness by allocating appropriate resources for building up the necessary KM Infrastructure and KM Processes. Second, the findings show that among the three elements in KM Infrastructure, KM Culture and KM Structure are more important in achieving KM Effectiveness. It suggests that senior management of institutions should assure adequate attention and resources have been vested in nurturing an institutional culture which is conducive to knowledge building and exchange. Fullan (2001) points out that ‘leading in a culture of change does
not mean placing changed individuals into unchanged environments. Rather, change leaders/agents work on changing the context, helping create new settings conducive to learning and sharing that learning’ (p.411). There need to be shared beliefs and values, as much as shared vision and goals among staff. Similarly, senior management of institutions should also give due attention to KM Structure (such as incentive scheme and reporting channels) that motivates knowledge acquisition and exchange. It is asserted by the agency theory and previous studies that if appropriate tangible and intangible incentives and rewards are offered, the effort exerted in sharing and reusing knowledge is likely to be modest. Senior management should make certain that staff’s annual performance appraisal, promotion and bonus calculation should take into consideration the components of group performance, knowledge sharing and innovative thinking. Third, the findings reveal that among the four elements in KM Processes, Knowledge Application is the most significant positive predictor of KM Effectiveness. It means that teaching staff expects to see how the newly acquired knowledge can be applied in the existing/future teaching and non-teaching duties. Thus, senior management should formalize necessary procedures for applying knowledge acquired (e.g. learning from previous teaching and projects) into the teaching and non-teaching activities (e.g. challenges or opportunities facing/ahead). Fourth, the findings indicate that Interpersonal Trust exerts a positive moderating effect on the relationship between KM Processes and KM Effectiveness. Similar result has been found in earlier research (Hoy et al., 2002) that stronger the trust in principal (or senior management) and colleagues, healthier the school climate, better the college performance. This has implications for senior management of institutions that Interpersonal Trust has a role to play in facilitating effective KM.

6 LIMITATIONS AND FUTURE RESEARCH

Limitations of the study should also be noted. First, the proposed model assumes the sub-constructs are independent. The possibility of the interrelation among sub-constructs should be considered when interpreting the results. Second, a cross-sectional research design could only captures a snapshot of research issues at a given point of time. It could not depict the evolutionary process of KM Effectiveness. Thus, longitudinal studies are needed to understand the phenomena at a deeper level. Third, causality between the hypothesized antecedents and KM Effectiveness in this study could only be inferred from statistics. A qualitative study may facilitate the explanation of causal relationships between constructs under investigation. Fourth, this study used non-probability sampling technique – convenience sampling – to gain access to the institutions. Although the two institutions selected were believed to be the representatives of a larger portion of institutions offering sub-degree programmes, the research findings have limited generalizability to the whole sub-degree sector. Finally, survey is the only instrument used in this study. The risk of common method bias needs to be acknowledged. This issue could be minimized in future research with a more comprehensive multi-trait or multi-method design. Use of objective measures of KM Effectiveness such as student education satisfaction, student academic development, professional development, ability to acquire resources, etc. as the criterion variables might help (Kwan and Walker, 2003), although it is noted that most institutions are reluctant to divulge such sensitive information to outsiders, even for research purposes.

Future research can extend the study to the same education sector but different geographic areas such as Australia and US. Moreover, a longitudinal study on the relationships of the constructs and the interrelationships of sub-constructs will give a deeper understanding of the results. In addition, applying the same research model to other stakeholders, e.g. students and administrative staff, will get a broader coverage and understanding on the same research issues. Finally, in future research, it is worth to use a more holistic approach to evaluate KM Effectiveness, e.g. including other factors such as staff proactive personality, organizational commitment, and/or staff employment satisfaction in the research model.
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