Workplace Dimensions: Tacit Knowledge Sharing in Universities

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***Abstract*—Knowledge management is a process through which organisational intellectual capital and information can be managed. In order to be successful, both large and small organizations rely on their acquired information and intellectual capital. The use of knowledge in organizations can attribute to improvements in organisational processes and is a key element in creating and sustaining competitive advantage. Universities are knowledge organizations with knowledge embedded in people and processes. Tacit knowledge is necessary for continual improvement and responding to the external changing environment. The focus of this paper is to analyze workplace dimensions that have an impact on the transfer of tacit knowledge in four Australian universities. Providing a conducive work environment can be a positive move towards motivating employees to engage in tacit knowledge transfer. The findings have revealed a positive consensus that universities are generally very favorable to tacit knowledge transfer. The results indicate a high level of commitment from universities towards the transfer of tacit knowledge.**

***Index Terms*—knowledge management, tacit knowledge transfer, knowledge retention, reuse, workplace, university.**

I. Introduction

Knowledge exists in both explicit (tangible) and tacit (intangible) forms. Tacit knowledge is knowledge people have in their minds and is, therefore, difficult to access. Universities are knowledge institutions with knowledge embedded in people and processes. In universities, the most important knowledge is often in the mind of academics thus difficult to spread through the university and its internal stakeholders because of time and resource constraints. One of the roles of academics is to tell and transfer their tacit knowledge into more explicit forms so that it is available for further reuse by the stakeholders. Hence university academics form the primary source of data for this research. The focus of this research is to analyze the transfer of tacit knowledge, with a key focus on workplace dimensions. It is hypothesized that providing an encouraging workplace environment will help in enhancing tacit knowledge transfer.

Nonaka & Takeuchi [1] suggest that collecting, storing and disseminating knowledge to the right people at the right time in the right place and in the right format is the key to effective knowledge management. Thus the importance of knowledge management in improving business processes cannot be over emphasised, since it creates value. So an important question is, do universities try to capture, retain and transfer tacit knowledge? Universities are expending a lot of effort in knowledge transfer through commercialization of research but little emphasis is placed on knowledge transfer efforts made by universities in passing their tacit knowledge to internal stakeholders who could be students and academic peers [2]. A study by Lin, Yeh & Tseng [3] found that gaps exist in the knowledge management efforts of organizations and these gaps need to be resolved to improve organizational performance. Filling these gaps will make organizational knowledge, especially knowledge that is created during various business processes, available for reuse in the future. Literature has provided few specific solutions to knowledge transfer problems that are based on empirical findings [4] and [5]. In response to the report by PhillipsKPA [2], Julie Bishop, ex-minister for Education, Science and Training pointed out in a forum that there is a need to identify the gaps within the current system so that a case for additional funding for knowledge transfer can be made [6]. She also stated that "At a later stage we may wish to consider the transfer of knowledge relating to scholarship and teaching" [6]-thus becoming one of the main reasons for choosing Australian universities as the target for this research.

This research will explore tacit knowledge transfer through surveys of academics in four Australian universities. The main purpose of this paper is to identify workplace dimensions/issues that have an impact on tacit knowledge transfer. Identifying such dimensions will enable universities to create a more favourable environment that fosters tacit knowledge sharing. To achieve this aim, the role of knowledge management (KM) activities has been explored in the next section. The paper then provides an insight into the methodology adopted for the study. Findings and discussion then follow in section four. Finally, the key premises of the research have been summarised and the paper's limitations are explicitly stated with an outlook for possible future research.

II. Knowledge Management

In a knowledge or information-based society, knowledge is becoming vital for enhanced organisational

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performance [7]. The skills of experienced employees are an incredibly valuable resource to any organization, if identified and nurtured, and organizations can gain competitive advantage only if these skills are transferred. Job mobility is increasing rapidly due to the global knowledge economy where employees move around six employers over their entire career [8]. This problem is exacerbated with an aging current workforce, the baby boomers retiring or approaching retirement age and fewer employees entering their prime working age during this period [9]. According to Pasternack and Viscio [10], knowledge and skills of experienced employees if not retained in the form of policies or structures within organizational memory will imply that knowledge will walk away with the employees when they leave the organization. Organizations need to expend resources in transferring the tacit knowledge of these employees and make it available for reuse. Drucker [11] advises that the key to competitive advantage for every organization is knowledge management. Knowledge management "involves people, processes, activities, technology, and the broader environment that enable the identification, creation, communication or sharing, and use of organizational and individual knowledge" [12].

Knowledge can be divided into two types - tacit knowledge and explicit knowledge [13]. Tacit knowledge is skills, ideas and experiences that people have in their minds and is, therefore, difficult to access and not necessarily able to be easily expressed. Tacit knowledge is implicit knowledge that is gained through experience by working and represents ones knowledge or abstract of learning. However most of the tacit knowledge remains implicit for various reasons. The most common reason could be lack of incentives in place to document or codify such knowledge [14]. Retaining such knowledge helps organizations form a broader knowledge base thereby increasing the sustainability of competitive advantage. Nonaka & Takeuchi [14] have defined explicit knowledge as knowledge that can be codified or documented; one that has verifiable evidence. Explicit knowledge is information that is available in the form of documents such as manuals, reports, policies, procedures and so forth.

According to Bassi [15] & Martensson [16] tacit knowledge of an individual becomes available to others when it is shared in public meetings or documented which in turn is received by others either by personal contacts or by reading documents. In other words tacit knowledge becomes explicit. Mentoring programs can be introduced in which experienced staff can train newcomers to understand business processes, technology and identify the values and of an organization [17]. Information technology (IT) can be used to make tacit knowledge explicit. Several authors [16], [18] and [19] have argued about the rather strong relationship between KM and IT. These authors emphasize that KM in organizations is fairly new and have proposed using IT to enhance the purpose and practice of KM activities in organizations . A KM system that adopts a balanced approach using IT in creating knowledge by codifying the tacit knowledge of the employees in the form of processes and disseminating it further is an important component of KM and highly recommended although this paper does not explore specific KM systems. The focus of this paper is on workplace dimensions of which IT is only a small part.

There need to be support systems in place for every organization where the acquired knowledge and skills of employees can be structured, stored, reprocessed and transferred to make use of it in critical decision making and strategic planning issues making knowledge a useful developmental tool [20], [21] and [22]. Expectations for sharing knowledge should be clearly stated by management [23]. Developing tacit knowledge transfer mechanisms needs the workplace environment as the best place for knowledge transfer 'through work-based action and social learning through communities of practice' [24].

III. Methodology

Universities are the epitome of learning that exhibit many characteristics of learning organizations. Universities are, also, an inseparable part of our growing society and play a key role in tacit knowledge transfer. Sharing knowledge is the *raison d'être* of universities although in many instances academics are often reluctant to share their tacit knowledge with others or simply do not have enough resources to undertake the transfer. Kidwell et al [25] concluded that universities have significant opportunities to apply knowledge management practices to support every part of their mission. According to Lim & Klobas [26], organizations need to have processes and systems in place that will promote knowledge acquisition, sharing, and creation. Karlsen and Gottschalk [27] have identified that knowledge management efforts should not be restricted to the IT discipline only so it is important to explore how knowledge management efforts can be integrated into universities. Rigorous identification of tacit knowledge transfer in universities is warranted, especially if it leads to improvements in organisational performance. Knowledge workers (academics in this case) capture and apply tacit knowledge which helps to develop and sustain competitive advantage [28] and [29]. Since it may not be possible at all times to retain knowledge workers, it is becoming increasingly important to preserve tacit knowledge [30]. McKinlay [31] suggests that some staff are reluctant to participate in the knowledge management efforts of their work places. Sharing of tacit knowledge is difficult, complex and time consuming [32]. Hence it is important to assess the workplace issues that are seen as being contributors to tacit knowledge sharing.

For this study, four Australian universities (names withheld for privacy reasons) have been selected based on their long history in the education sector thus providing a lot of scope for analysing tacit knowledge transfer. These four universities are undergoing a lot of change, both in terms of organisational structure and introduction of new programs, and are rapidly strengthening their position towards the provision of learning and teaching services to national and

international students. It is their uniqueness in the education sector that makes them ideal for this study. Hence the survey focussed on academics in universities because academics can be classified as knowledge workers. The solitary research instrument that can reveal and build on tacit knowledge is the human [33]. Questionnaires are an efficient data collection mechanism when the researcher knows exactly what is required and how to measure the variables of interest [34]. A questionnaire has been developed for this study because they are economical to administer, cater for a rapid turnaround in data collection and allow the collection of views from a larger population [35]. Various dimensions of tacit knowledge transfer were assessed in the questionnaire however this paper only focuses on the workplace dimensions. The respondent profile considered ideal for the questionnaires was academics at any level of tenure because that would provide a good reflection of their willingness to contribute towards tacit knowledge transfer. Close ended questions in the questionnaire were structured using the Likert-scale format using a 6-point rating scale. The response categories for the rating scale for the close-ended questions were ordered as strongly disagree, disagree, neither agree nor disagree, agree, strongly agree, and don't know.

When there is a scarcity of financial resources and when exploratory or pilot studies are under consideration, samples with numbers between 10 and 30 can be valuable [36]. This study gathered data from 141 respondents. 100 responses provide a margin of error of 10% thus providing more confidence in the results. So with a higher number of respondents the margin of error will be less. At the same time, as noted by Sandelowski [37], the sample should not be so small that it becomes difficult to achieve data saturation [38] and [39], theoretical saturation [40], or informational redundancy [33].

The survey instrument was developed by the researchers and administered online. The workplace dimension part of the Likert scale questionnaire had eleven questions. Participation in the survey was entirely voluntary and respondents were free to discontinue at any time, without the need for reason or explanation. To encourage participation respondents were informed that the identity of the participant and university will remain anonymous.

IV. Findings and Discussion

Statistical analysis can be described as a form of modelling that explicitly recognises the existence of uncertainty in a set of data [41]. Statistical analysis is conventionally seen as having two possible roles – descriptive and inferential. Dewberry [42] has defined descriptive analysis as being concerned with describing numbers and relationships between them whilst inferential analysis focusses upon trying to draw conclusions that extend beyond the immediate data alone. The main approach in examining the ordinal data was descriptive. The survey data has been simplified by combining the response categories into two nominal categories - agree and disagree. Respondents who were undecided or did not know the answer were filtered out.

A total of 141 responses were received from the four universities. 90 responses were from males and 51 from females. 53 respondents were between the age of 50 to 59 whilst 24 were between 60 to 69 years. 70.9% of the respondents were on-going full time staff. 58.9% of the respondents had PhD qualifications. The academics who responded have been working at these universities for varying tenures – 13% have been working for less than 1 year, 48% for 1 to 5 years, 25% for 5 to 10 years, 23% for 10 to 15 years, 9% for 15 to 20 years and 23% above 20 years. 66% of respondents agreed that their workplace encourages and facilitates the sharing of professional experiences, skills and knowledge with others. 56% of respondents disagreed that their workplace provides adequate time to document and share their tacit knowledge. 39% of respondents showed disagreement regarding the encouragement that their workplace provides for transferring of ideas, skills and experiences through mentoring programs. 39% felt that their workplace encourages contribution of ideas, skills, and experiences through rotation of courses. 66% agreed that their workplace facilitates transfer of personal ideas, skills and experiences through seminar and workshops. 43% of respondents reported that their workplace does not have an up-to-date directory of academics that can provide information about their work, skills and experience. 36% accepted that their workplace has a formal process of transferring best practices through regular documentation like FAQs, administrative manuals, lessons learnt, and conference reports. 53% reported that their workplace fosters formal networks, such as communities of practice. 65% of respondents agreed that their workplace encourages sharing of ideas amongst academics. 37% agreed that their workplace provides opportunities for employees to interact with one another on an informal basis (for instance time off work and social gatherings). 56% of respondents agreed that these opportunities that their workplace provides are important for sharing skills and experience.

The findings have revealed a positive consensus that the surveyed universities are generally very favourable to tacit knowledge transfer. The results indicate a high level of commitment from these universities towards the transfer of tacit knowledge. Largely, academics have also portrayed a strong belief in the commitment that universities have towards tacit knowledge transfer which indicates a very positive outlook. Time seemed to be one of the deterrents towards tacit knowledge transfer and universities need to address this issue by providing staff time or a reduction in their regular teaching loads. Expertise finder directories should be developed so that it is easy to identify staff that specialise in particular areas of expertise. Formal processes of transferring best practices should be explored and implemented. Where possible, academics should be encouraged to document their tacit knowledge. Universities should also explore opportunities to develop more mentoring programs for

staff especially given that this will be a valuable tool in transferring tacit knowledge.

V. Conclusion

Tacit knowledge transfer is important for all organizations and universities are no exception. It is hoped that such a study would benefit research in tacit knowledge management and also eliminate confusion as to where universities should focus their knowledge management efforts for optimizing performance and making tacit knowledge transfer possible. Since the creation and acquisition of knowledge is important for any organization, it is vital to identify key workplace dimensions of tacit knowledge transfer that provide a conducive environment. Some of the key dimensions that were assessed are: staff encouragement and facilitation processes, adequate time, mentoring programs, rotation of courses taught, up-to-date expertise directory, formal documentation processes, formal networks, and informal interaction amongst staff. The study has revealed that universities generally provide very conducive workplace dimensions for tacit knowledge transfer to take place.

The reviewed literature suggests that there is a significant relationship between tacit knowledge transfer and workplace environment. This empirical study confirms this proposition. The findings have revealed that universities are trying hard to capture, retain and transfer tacit knowledge although there are some areas where further improvement is possible.

The veracity of these key dimensions has not been tested yet so their accuracy and utility in universities remain open to future deliberation. However since a large number of respondents have shown their agreement to most of these dimensions, it is assumed that dimensions are important for tacit knowledge transfer. Based on a sample of 141 surveys, it would be inappropriate to generalize the findings to a larger population of academics. The data gained is not necessarily indicative of the universities but only indicative of the academics who responded. This study has only looked at the workplace dimensions that influence tacit knowledge transfer, hence future studies could explore other important dimensions that have an impact on tacit knowledge such as employee behavior, cultural background, technology and so forth.

For any organisation, tacit knowledge is an intangible asset for any organisation which is ingrained in their employees and leaves the company once the employee decides to leave. This paper has emphasised that providing a favourable workplace environment is an important factor for tacit knowledge transfer to take place. In conclusion, universities should continue to provide ample opportunities for tacit knowledge transfer. This will enable them to have a competitive advantage and also ensure that tacit knowledge is readily available for reuse.

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