

Running head: EXAMINING THE USE OF KNOWLEDGE MANAGEMENT

Examining the Use of Knowledge Management  
in a University Department

By

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## EXAMINING THE USE OF KNOWLEDGE MANAGEMENT

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## EXAMINING THE USE OF KNOWLEDGE MANAGEMENT

### **Disclaimer**

This project is submitted in partial fulfillment of the degree of Master of Arts in Communications and Technology at the University of Alberta and does not represent the views of the international student recruitment department (IRD) or any other individuals or entities referenced or acknowledged in this document. It is the product of my own labour and may be freely copied and distributed provided the source is acknowledged.

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## EXAMINING THE USE OF KNOWLEDGE MANAGEMENT

### **Abstract**

This study considers the field of knowledge management (KM) in theory and practice and looks at issues related to the implementation of KM initiatives in an organizational setting.

This is an exploratory, cross-sectional case study that applies an existing KM framework to a single organization – an international student recruitment department (IRD) at a Canadian public university. The IRD is a growing and geographically distributed department (multiple campuses and remote representatives). Using a focus group format with six participants that was supplemented with a survey, the researcher seeks data to explore perceptions and attitudes related to KM.

The study found that participants often rely on colleagues for knowledge and information and that the methods currently used to manage knowledge in the IRD are complex and lack searchability. While perceptions of the potential value of a more formal KM system were mostly positive, participants also have concerns about the practicalities of implementation – primarily regarding time requirements and whether new tools for managing knowledge would be adopted broadly.

Further research could look more deeply into participant concerns about the prospect of a KM implementation; organizational readiness factors revealed here may assist other organizations in planning a KM initiative.



## **Introduction**

My journey to this research began with my interest in issues related to organizational knowledge and learning, and the potential value of exploring these issues as they relate to my work. This led me to a search for graduate programs that would be able to facilitate this process. As a bachelor of commerce graduate, I wanted to try a program that took a different approach to this issue (i.e. not a business approach). This search brought me to the Masters of Arts in Communications and Technology (MACT) program at the University of Alberta's (U of A) Faculty of Extension.

The MACT program focuses on communications and technology in both theory and practice. This focus seemed like it would be a good fit for my area of interest. The MACT program is offered in a blended format and consists of two, three-week Spring Institutes held at the U of A. Four courses are completed during the Spring Institutes in addition to six courses conducted online, followed by a capping project. This format allowed me to pursue the program while working full-time. This paper marks the culminating capping project for the MACT program.

I previously held a management-level position within the centralized international student recruitment department (IRD) of the university of interest for this project (the IRD is described below). My work in the secondary and post-secondary international education sector spans sixteen years at four institutions in Canada. All roles during this period were of an administrative, service-oriented nature. In my more recent positions, I found that gaining access to corporate knowledge became increasingly important in enabling me to do my work more effectively.

At the IRD, my work involved the development of strategic student recruitment initiatives that engaged populations of international students from emerging economies in Southeast Asia and Latin America and regions of interest to the university that would help expand the institution's geographic diversity of international students. Examples of these initiatives included partnering with different international stakeholders or working within the university to package new undergraduate program offerings that would appeal to international student segments that were not previously targeted. This type of work involved the need to develop business processes to meet the needs of new international student programs while working within the structure of university policy and collaborating with academic, legal and operational departments. Examples of these business processes included new admissions processes and capacity planning for visiting international undergraduate students. To undertake this process, it required reaching out to colleagues across the institution to access existing knowledge and better understand the possibilities and limitations for such programming. This required collaboration and the knowledge and expertise of colleagues who had made previous efforts to engage new markets. We benefited from their lessons learned by not having to repeat past mistakes and their knowledge of key university contacts and issues that should be considered. In addition to not having to learn processes from scratch, this also sped up the development of our processes.

One of the courses I had taken during the MACT program was Knowledge Management (KM) and Communications Technology. While taking this course, the IRD was going through the process of acquiring a Customer Relationship Management (CRM) system to help our department better manage our prospective student recruitment efforts.

The function of the CRM was to collect data about prospective students through multiple communication channels so that the university could better cater to their needs and interests. The goal of this was to create a better experience for prospective students because IRD staff would be able to access the collected data and create a more customized interaction with its prospective students. As a member of the implementation team for the new CRM for approximately two years, I became increasingly interested in understanding how an organization prepares itself for a successful system implementation – how does an organization improve its readiness for such a process?

For the major paper in that course I chose to write about organizational readiness and implementation issues related to the introduction of a system that would combine a CRM, which focuses on customers (e.g. prospective students), with the practices used to manage knowledge within the organization, which is more internally focused (e.g. the knowledge within the IRD). Following that paper, I wanted to better understand how to capture colleague expertise and institutional knowledge in a way that could be sustained. I felt that managing knowledge was an issue likely faced by many organizations, so it was a topic that could be useful to better understand. My interest in organizational communication issues combined with my exposure to KM via the MACT program and my career related experiences allowed me to use the MACT capping project as a vehicle to research the topic of KM in organizations – particularly, KM implementation issues and what constitutes organizational readiness for a KM initiative.

### **International Recruitment Department (IRD)**

IRD is based in a large public research university (more than 30,000 students) with more than one campus. The IRD is an administrative department that facilitates the

recruitment of international students to the university's undergraduate programs for all faculties and campuses and is responsible for supporting the university's international undergraduate enrollment targets, which are set by each of the faculties. The IRD pursues these targets through efforts across multiple marketing and promotional channels and by providing direct and electronic methods of advising and support services to prospective international students and parents. These services also extend to a vast network of high school counsellors and other affiliated stakeholders worldwide.

The IRD is a knowledge-based and service-oriented organization. For example, IRD staff work directly with students, parents, counsellors, organizations, governments and others, collecting information and know-how about the university (e.g. programs, services, policies and processes) and external stakeholders (e.g. independent consultants, international education associations, international scholarship organizations, etc.). These activities occur within a wide range of cultures and regions. The IRD operates in a proprietary manner in a competitive landscape where detailed strategic information about business operations are not openly shared with peer departments at other universities. The reason for this is that the IRD shapes its operations in order to attract undergraduate international students who might also be considering competitor universities in Canada, the US, UK, Australia or other destinations.

IRD staff collectively travel to several dozen countries each year to maintain existing stakeholder relations, and forge new ones, while conducting direct recruitment and promotional activities. Over time, individual staff members increase their learning and understanding about the university's programs, services and admissions policies and processes. They also build strong relational ties and become knowledgeable about social,

cultural, political and economic aspects of the international regions in which they travel. Meanwhile, other staff in the IRD may not travel, but similarly need to increase their expertise in their respective areas such as prospective student marketing and communications, on-campus recruitment, shipping and logistics, and web-based recruitment initiatives.

The IRD is a relatively large university department, whose members are geographically distributed – about two-thirds of staff are based on the larger campus, with others based on another campus as well as individual staff based in countries across Europe, Asia, South America, the Middle East and Africa. The size of the IRD department has approximately doubled in the last ten years but the rate of growth has levelled in recent years.

The university's IRD has a mandate to increase the volume and diversity of international undergraduate students attending the university through its international student recruitment efforts. The rationale for internationalization at the university and, specifically, the motivations behind international student recruitment (one of several components related to internationalization) is not a focus of this paper.

### **Relevance of Knowledge Management to the IRD**

When I first started working at the IRD I sensed that there were many people with deep knowledge in their respective areas of work and that it would take me awhile to gain an understanding of who to go to for which type of information. When I had a question or was starting a task or project I would often think to myself, “someone has probably already done this”, but I was often unaware of what knowledge already existed among colleagues and how I would go about accessing it.

Over the years, the IRD staff members have developed methods and locations for storing knowledge. In the earlier years of the department, this started with central paper filing cabinets and progressed to a shared electronic filing system, a synchronous departmental wiki and a CRM system among others. These developments were an evolution over time as the department reached the need for such tools.

The geographically distributed nature of the department has shaped much of the way the IRD organizes itself in order to keep everyone connected. In addition to the knowledge storage practices and central systems already referenced, the department invests time and effort to ensure multi-site teams are connected through one-to-one Skype meetings or group meetings using videoconferencing technology and regular use of instant messaging tools. Despite these systems and the efforts made to sustain them, staff members contend with barriers of time, varying repository structures that get more complicated as they grow, or the physical absence of knowledgeable colleagues who may be travelling when they are needed.

Staff turnover has remained relatively low, but the growing demand for international students by the university's faculties has driven an influx of new staff. Simultaneously, the retirement or departure of the department's more experienced individuals becomes more imminent as members of the senior leadership near retirement or approach mid-career advancement opportunities. This increases the risk of valuable know-how being lost to the organization if it is not captured and made accessible to those who remain.

More could be done to try to capture the knowledge that exists before it escapes the organization. However, much of the work at the IRD is interpersonal or relationship-

based with external stakeholders and the form of knowledge is tacit, as opposed to technical or explicit. This type of knowledge can be difficult to codify, store and access, which does not lend itself to a static interface. Thus, exploring knowledge management approaches that focus on preserving and providing access to organizational knowledge is of interest here. In doing so, such exploration must also consider the challenges that come with the process of implementation in a real life setting and take this into account. These risks and challenges are not unique and could be relevant to other Canadian university departments or distributed organizations.

### **Rationale for a Knowledge Management Study**

Given my interests in KM issues in my place of work, the conditions that exist within the IRD should be an ideal platform to explore. The formation of the KM approaches currently used at the IRD developed organically over time while the department has continued to grow in size, complexity and geographical distribution. Conducting a KM study presents an opportunity to explore the IRD's existing KM tools and the aspects that have worked well, or not, and what opportunities and challenges may occur when considering the implementation of a more formal KM approach within its practice. It is hoped that the exploration of KM in the context of the IRD can bring insight to the process of implementing KM in a single organization. This may also benefit the IRD in better understanding KM and the factors that should be considered to prepare the organization effectively for a KM system implementation.

### **Literature Review**

The first part of the literature review focuses on defining knowledge management (KM), as well as understanding the history of KM, and a look at the topics of knowledge and KM in various organizational contexts. This is followed by a scan of the topic of global student mobility, which is the researcher's area of interest for using KM. The external and internal challenges faced by Canadian universities and how these relate to global student mobility will also be covered.

#### **Knowledge Management Definition**

It is recognized that "knowledge may be viewed from several perspectives" (Alavi & Leidner, 2001, p. 109) and that "these different views of knowledge lead to different perceptions of knowledge management" (Carlsson et al., 1996 as cited in Alavi & Leidner, 2001, p. 110). Dalkir (2011) writes, "a great deal of conceptual complexity derives from the fact that a word such as *knowledge* is necessarily subjective in nature, not to mention value laden in interpretation" (p. 11).

Given the breadth of perceptions and dimensions of knowledge, a commonly accepted definition of KM would be difficult to achieve. The many interpretations of managing knowledge vary depending on the unique contexts of each organization. Researchers such as Dalkir (2011) identified over one hundred published definitions for KM and noted "Carla O'Dell has gathered over sixty" (p. 5). According to Dalkir, "the lack of agreement on one universal formulation of a definition for knowledge management makes it essential to develop one for each organization" (p. 15).

This customized approach to defining KM may be of interest to organizations in understanding how knowledge can be managed in a way that supports the organization.



However, this does not offer a standard framework that can be applied to more than just a single organization. Without a common definition, it makes it increasingly difficult for researchers to study KM without a unique definition that is accepted across organizations.

Rather than focusing on an overarching definition, it seems worthwhile to try to better understand the management of knowledge by looking at the underlying components of knowledge management. Alavi & Leidner (2001) summarize KM as consisting of four processes: “creating, storing/retrieving, transferring, and applying knowledge” (p. 114). This process view deconstructs KM into a practical and reusable framework that focuses on the components that could make up KM, rather than trying to determine a relevant general definition for KM. This approach is about better understanding the pieces of KM within an organizational context.

### **Knowledge Management History**

Knowledge management (KM) emerged in the late 1980s (Dalkir, 2011), and became an area of mainstream focus for private and public organizations, academics and consultants in the mid-1990s (Tuomi, 2002; Hislop, 2013). Since then, there has been increased research of KM in scholarly literature (Hislop, 2013; Cerchione, Esposito & Spadaro, 2016). Researchers suggest the expansion of KM literature coincides with the global shift from an industrial economy to an increasingly knowledge-intensive economy where knowledge is considered an organizational asset (Spender and Scherer, 2007; Hislop, 2013) or, more specifically, a source of competitive advantage (Makani, 2012). Others refer to KM as a response to social and economic trends such as globalization, adoption of computing and the knowledge-centric view of the firm (Prusak, 2001). This

more recent era is sometimes referred to as the post-industrial society where the main wealth generators are now knowledge-based goods and services (Hislop, 2013).

There appear to be varying perspectives on the origins of KM and where the concept originated. Dalkir (2011) takes a broader view that “philosophers, teachers, and writers have been making use of many of the same [KM] techniques for decades” (p. 17); and does not seem to point to a founding thought leader or source of the concept.

Meanwhile, Alavi & Leidner (2001), Darroch (2005) and Teece (2009) suggest that KM built off of the resource-based theory of the firm, which emerged from Edith Penrose’s seminal book in 1959: *The Theory of the Growth of the Firm*. Hislop (2013) points to a different origin, arguing that sociologist Daniel Bell and his influential 1973 publication, *The Coming of Post-Industrial Society*, “provided the main inspiration for contemporary writers in the area of knowledge management” (p.3).

Tuomi’s (2002) perspective is that KM has origins in four different areas that were considered independent until the late 1990s: organizational information processing, business intelligence, organizational cognition, and organizational development. His view is that rather than having one well-defined KM discipline we need several characterizations, each being somewhat ambiguous, overlapping and context-dependent.

According to Tuomi, the exact origins of KM and the history of its development may depend on whether one is taking a view through an economic, sociological or philosophical lens, or perhaps from the perspective of a particular community of practice or industry. For the practical purposes of this study, Tuomi’s interpretation that it is advantageous to maintain an openly-defined approach to KM seems like a good fit when examining KM from an organizational perspective.

### **Knowledge Management Use in Organizations**

There is a common theme that knowledge, in the organizational context, has increasingly been considered a valuable strategic resource (Cruywagen, Swart & Gevers, 2008) where it is widely viewed that KM leverages collective knowledge to the benefit of the organization (Alavi & Leidner, 2001; Chatzoudes, Chatzoglou & Vraimaki, 2015). Examples of these benefits include mitigating the loss of institutional knowledge as a result of staff turnover, providing better access to knowledge and information in distributed organizations and providing more robust knowledge resources for training new staff. Further, researchers indicate that KM has become one of the most important means of achieving sustainable competitive advantage in an organization (Nonaka, 1994; Connor, 2002; Makani, 2012). However, others are not satisfied that the presence of KM, in and of itself, is enough to generate competitive advantage. Grant (1996) emphasizes the need for integration and coordination of knowledge among diverse specialists – adding diversity of knowledge as a factor for consideration. Similarly, Teece (2009) introduces a “dynamic capabilities approach” that outlines an organization’s need to actively adjust to the changing business environment by adapting skills and resources in order to compete.

There are also those who suggest the research on KM ranges from “overwhelmingly optimistic” (Storey & Barnett, 2000) in the claims made about what KM promises versus what it can actually deliver, to nothing more than a “utopian ideal” (Wilson, 2002). The latter comes from one of the most outspoken critics, suggesting KM is a management fad introduced by the private sector that would likely fade like previous fads (Wilson, 2002). Meanwhile, Storey & Barnett (2000) argue that the literature does

not adequately address why so many KM initiatives fail. Other researchers express similar concern about a lack of empirical research and evidence regarding the performance results of KM (Pee & Kankanhalli, 2016). These conflicting views on KM may have to do with the differences documented about the appeal and potential of KM in theory and the specific challenges that emerge when putting KM theory into practice. From the literature, it appears that KM has promise but whether it can be successfully implemented is yet to be determined. As such, understanding the process of KM and what is necessary to foster success would be worthwhile.

While there is extensive literature on the topic of KM in organizations (Hislop, 2013), empirical studies focusing on how KM systems are implemented in specific types, sizes, sectors or contexts of organizations remains limited (Cruywagen et al., 2008; Zammit & Woodman, 2012; Cerchione et al., 2016; Pee & Kankanhalli, 2016). Of interest for this research is the factors that affect implementation success in a specific organization, such as a small or medium-sized enterprise (SMEs); knowledge-intensive or service-oriented organizations; and public-sector examples. Also of interest was the application of KM within organizations, such as KM best practices and KM effects on organizational performance.

Studies focusing on small or medium-sized enterprises (SMEs) are fragmented and remain largely unexplored (Cerchione et al., 2016; Cruywagen et al., 2008) and point to a void of insight into the contextual differences in organizations and how these differences may affect an organization's approach to KM – an example is the lack of comparisons of developing KM for public versus private sector organizations (Pee & Kankanhalli, 2016).

The varying perspectives on KM creates challenges, but there are underlying commonalities that emerge from the literature. First, as already outlined, the definitions and practice of KM are highly contextual and KM is still considered to be a relatively new field. There is also consistency in the number of researchers indicating there is a limited number and range of empirical studies focusing on specific contexts. This latter point is of particular interest to those organizations looking to embark on the implementation of a KM initiative. This reinforces the need for organizations to carefully consider their own context and determine their own needs and reasons for managing knowledge in the first place and what potential value it would present to the organization.

### **Knowledge Management in Practice**

#### **Implementation Issues.**

There are various researchers (e.g., Ambrosio, 2000; Storey & Barnett, 2000; Zammit & Woodman, 2012; Lin & Ha, 2015) who each cite Daniel Morehead, director of organizational research for British Telecommunications PLC, who declared that KM initiatives fail approximately 50-70% of the time. In this case, Morehead qualifies failure by explaining that "most knowledge management projects simply don't hit their stated goals and objectives...[so] that 70% doesn't mean they fail totally - it means that they don't accomplish what they set out to do" (as cited in Ambrosio, 2000). This is understandable given the many potential barriers or variables at play among the individuals engaged in a KM initiative. However, researchers rely heavily, either directly or indirectly, on the failure rate presented in Morehead's claim, as quoted by Ambrosio (2000). While this figure may not be a generalizable benchmark, researchers do present

examples that demonstrate limitations and barriers to KM implementation in organizations, as well as recommendations for best practices.

There are myriad potential barriers that may affect the implementation of a KM initiative including: KM system design, organizational culture, lack of consensus, the role of technology, managerial support and relevance of the initiative to the user.

Additionally, KM projects tend to be information system (IS)-dominated and lack attention to organizational complexities, tacit forms of knowledge and the needs of users (Storey & Barnett, 2000). KM initiatives are often converted into an IS solution, illustrating the confusion that persists in understanding the differences between an IS and a KM system (Zammit & Woodman, 2012). This is understandable as the technological portion of KM is the only part of the initiative that is visible or tangible and requires a physical implementation, which is most likely done by an IT department. By default, this may leave KM initiatives in the hands of IT if not managed as a system that integrates the technology with the end users who feed the system with their knowledge. Ideally, a KM system takes a socio-technical view that users are part of the KM system as opposed to being separate from it (Zammit & Woodman, 2012). Technology does not, by itself, motivate an employee to seek knowledge nor create a learning organization, a meritocracy or a knowledge-creating company (Davenport & Prusak, 1998). If the end user is not engaged with the system and does not see their role in it, they are not likely to feed the system with knowledge. Conversely, without appropriate systems, individuals and organizations are limited in their ability to manage the knowledge they have.

A key aspect of a KM system is that it provides a flexible, responsive system design that evolves with changes in the business environment (Zammit & Woodman, 2012).

However, even with an ideal KM system design, Zammit & Woodman's (2012) study supported the view that possessing the right tools does not imply doing the right job. In their study, organizational culture hindered the firm and its employees from sharing knowledge. In this case "it clearly emerges that the technology is not the [knowledge management system]. It is merely enabling the sharing culture of the [community of practice] to have a central common place" (p. 7).

In research conducted by Hibbard & Carillo (1998), "users clearly identify cultural issues as the largest obstacles to implementing knowledge management" (p. 49). During the implementation of a KM system in Zammit & Woodman's (2012) study, it was observed that the users most eager to learn were, in the end, the most resistant to contributing to the knowledge repository because they did not know what they were supposed to contribute.

In some cases, wide-ranging perspectives on relevant knowledge can contribute to a lack of consensus on the intent behind a KM project and can also lead to political turf wars (Storey & Barnett, 2000). Other common KM implementation issues stem from a lack of focus on one or two strategic business priorities, leadership support without direct engagement, or business objectives that are not specific enough (Storey & Barnett, 2000). KM implementation may also be adversely affected by incorporating best practices without adequately considering the organizational context (Cruywagen et al., 2008).

While there are barriers at play that impede the implementation of KM initiatives, these barriers are not impenetrable. Arguably, many of these barriers are under direct control of the organization. It appears that the success or failure of KM does not necessarily relate to the particular KM tool. Rather, the outcome has more to do with the

process by which KM is conceptualized and facilitated within the organization. The process view of KM is again relevant here, where organizations must consider their knowledge creation, storage, transfer and application needs. The organization then needs to internalize what is required to facilitate those processes and whether the conditions of the organization are such that these processes can be supported.

### **Best Practices and Best Fit Approaches.**

Literature about KM suggests that frameworks should consider best fit, as opposed to simply following a list of best practices given the contextual differences between organizations. A best practice in one setting may not be ideal in another (Cruywagen et al., 2008). This suggests understanding an organization's context first before identifying the most suitable approach to KM implementation (Cruywagen et al., 2008).

There are some practices, however, that are malleable to specific contexts to support a "best fit" approach. For example, various researchers recommend placing the end user at the centre of a KM initiative given their critical role in the successful adoption and implementation of a KM system (Zammit & Woodman, 2012; Chatzoudes et al., 2015). The needs of the KM system users have to be taken seriously into account (Storey & Barnett, 2000). Encouraging users to capture only what they believe is knowledge that is useful to others was found to be an empowering approach that helped boost morale (Zammit & Woodman, 2012). A further way to prioritize the user is to introduce social incentives – rewards and recognition for knowledge sharing (Zammit & Woodman, 2012; Chang & Lin, 2015).

Managerial support that is continuous and delivered in a practical and public manner is another recommended practice (Storey & Barnett, 2000). The extent to which



this practice is essential may vary by organization. For example, Pee and Kankanhalli (2016) suggest that “senior management championship has the strongest enhancing effect” (p. 197) in a public-sector setting. Conversely, beyond simply assuring a consistent presence of managerial support, Chang & Lin (2015) argue that management must cultivate an organizational culture conducive to KM in order to allow for implementation and process success. Their findings indicate that those organizations that manage to foster results-oriented (risk-taking and innovative), job-oriented (performance, productivity, organizational commitment) and loosely controlled (relaxed, easy-going work environment) cultural dimensions will have the greatest positive effect on KM. Even if management succeeds in fostering such an organizational culture, the values of individual employees are found to influence their acquisition of knowledge (Pivec & Potocan, 2015) – particularly those most dedicated to personal development and most loyal to the organization. As such, “KM requires a major shift in organizational culture and a commitment at all levels of a firm to make it work” (Chang & Lin, 2015, p. 437).

Given the various references to KM implementation challenges, and the multitude of factors that researchers find impactful on KM in an organizational setting, it would seem prudent that much consideration of these issues be made prior to the implementation of a KM initiative. Incorporating adequate lead time to a KM implementation might allow management to assess the organization’s culture and overall readiness for introducing a KM initiative. Part of this process might include the need for building consensus within the organization and campaigning for the rationale for KM in the organization.

Similar to approaching definitions of knowledge and knowledge management, it is difficult to be declarative as to one best way to approach KM in an organization, though some do seem broadly applicable (i.e. placing the end user at the centre of the KM initiative). The contextual uniqueness of an organization, the employees and culture that comprise it, and the business environment it operates in appear to play a role in determining what may be an effective means of introducing, implementing and sustaining KM in an organization. To this end, comparing organizations, or borrowing practices from one context and applying them to another, is not likely to be an effective approach for researching KM as the conditions of each organization are so unique. Alternatively, using a more applicable framework, such as to use components that make up KM, would be a possible means of researching KM in a particular setting.

The literature provides insight into the conditions that would have to be considered for a KM initiative to be successful. Additionally, the literature presents approaches to KM system design and implementation that may guide such an organization towards methods that would best fit its context.

### **Knowledge Management in a Single Context.**

KM literature presents wide-ranging contexts and perspectives on best practices that pertain to varying organizational settings. It is useful to be aware of the range that exists when considering KM issues that may arise in a single organizational setting. However, the researcher's focus is on considering these factors and exploring some of the different components of KM. A good way to do this is to focus on a single organizational context. Alavi and Leidner's (2001) description of KM consisting of the creation, storage,

transfer and application of knowledge in an organization would be relevant here as it presents a process view of KM and a practical way to explore these components.

Among the literature, Massingham's (2014) empirical, longitudinal case study of the Australian Department of Defense (ADD) seemed to align with a process view to exploring KM. The purpose of his research is to determine the extent to which knowledge can be managed in an organization, whether KM can be implemented and have an impact on the performance of an organization. His research involves looking at the components of KM and how they interact within the ADD context, rather than using a model that might only be relevant to the ADD. As described below, Massingham focuses part of his research on a process view of KM, which can be extracted as a model to explore in another setting. This approach can deal with the varying factors and unique features that come with each organization being researched.

Due to the breadth of his study, Massingham divided his research into two: one was centered on the product view of KM and the other on the process view. In the product view, Massingham (2014) defined KM as a resource where knowledge is an aid to "decision-making and delivers corporate governance in terms of planning, risk management and budgeting" (p. 1076). In this context he developed four toolkits: strategy, creation, retention and measurement. These toolkits contain a total of 16 KM tools which were examined in the organizational context of the ADD to see if they could address the criticisms that knowledge cannot be managed, KM is difficult to implement and that there is a lack of evidence that KM improves organizational performance.

Massingham's second research focus was on the process view of KM. In the process view, Massingham defines KM as flows and enablers that assist in "creating

value from knowledge and delivering performance improvement in terms of problem-solving, productivity and embeddedness” (p. 1076). For this section, Massingham develops and examines four KM toolkits: sharing, acquisition, usage and preservation. These toolkits contain 23 KM tools for an overall total of 8 toolkits encompassing 39 KM tools across the two halves of the study.

In Massingham’s results, he found in both studies that, while KM implementation in an organization was indeed a challenge as critics had suggested, his findings were that knowledge could be managed and that KM did prove to have a direct impact on firm performance. However, the KM toolkits and the individual KM tools within each ranged in their effectiveness. Massingham invites others to conduct further research to see if the toolkits or tools themselves behave differently in other settings.

The second part of Massingham’s study, which uses the process view of KM, is of particular interest for this project as it focuses on the components of KM that deal with “creating value from knowledge and delivering performance improvement”.

### **Global Student Mobility**

According to the Organization for Economic Cooperation and Development (OECD), “over the past three decades, the number of students enrolled outside their country of citizenship has risen... from 0.8 million worldwide in 1975 to 4.5 million in 2012, a more than fivefold increase” (OECD, 2014, p.360). By the end of 2016 approximately five million students were studying outside of their home country (ICEF Monitor, 2017). Most current reports by media and organizations in the international education sector (for example, ICEF Monitor, 2017; US Department of Commerce, 2016)

rely on this same OECD data and analysis conducted in 2014 which estimates that there will be approximately eight million globally mobile students by 2025.

This growth is primarily a result of the “gap between demand for higher education and the ability of governments and traditional higher education institutions to provide sufficient opportunities... for their citizens” (Banks and Bhandari, 2012, p. 379). Certain developing economies that have an insufficient higher education supply with a growing middle class, contributes to the number of internationally mobile students (Hudzik, 2016). Additionally, the shift towards globalized economies, and from industrial to knowledge-based societies, reinforces the international flow of students (Guruz, 2011).

In addition to these influences, there are various push and pull factors that contribute to the increased number of globally mobile students. Push factors exist in the source country and initiate a student’s decision to study abroad (Mazzarol & Soutar, 2002). For example, push factors may include a student’s desire for personal development, enhanced employability or migration opportunities in the destination country (Woodfield, 2010); or incentives that support a government’s aim to strengthen their country’s education and research capacity (often supported by outbound government scholarships or grants), or to enhance ties with particular countries. Pull factors relate to the relative attractiveness of a study destination (Mazzarol & Soutar, 2002), which are enabled or hindered by factors such as the perception of a country as a whole with respect to its language, culture, diversity, climate, safety, perceived level of education quality, government policies stipulating work opportunities, visa and immigration regulations and the cost of living (Woodfield, 2010). Pull factors at the institutional level may include tuition and student fees, scholarships, institutional reputation and rankings, lifestyle,

support services, and the institutional marketing initiatives that help convey this information to prospective students.

While the number of globally mobile students is increasing, there are over 18,000 universities worldwide (International Association of Universities, 2014) and the number of countries that are considered primarily receiving (or host) countries, as opposed to sending (or source) countries, is beginning to shift. To date, students have migrated to what are considered major receiving countries, such as the United States (24%), the United Kingdom (11%), China (10%), Australia (7%), France (7%), Canada (7%), Russia (6%) and Germany (6%) (Institute for International Education, 2017). However, countries that have traditionally been major sending countries, such as China, India, South Korea, Singapore, Malaysia, South Africa, Russia and Brazil, are now attracting and actively seeking more students from abroad (Choudaha & de Wit, 2014). This increase in supply of destination institutions in a broader range of countries is an added competitive variable that Canadian institutions may face when trying to attract international students.

From the higher education perspective, the motivations that have driven the increased internationalization of universities has traditionally been separated into four categories: social and cultural, political, academic, and economic (Knight, 2015). This is to say that there are multiple reasons motivating a university's engagement in internationalization initiatives.<sup>1</sup>

### **External and Internal Challenges**

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<sup>1</sup> See Knight (2015) for a thorough summary of the definitions and components of internationalization in higher education.

It is important to understand some of the pressures and challenges institutions in Canada face as they compete to attract top student talent while also seeking specific targets – both in terms of enrollment numbers and the geographic diversity of the incoming class of students. The question of “why” post-secondary institutions are competing in this way has several possible answers. One factor is that Canadian universities, and universities around the world, face a trend of a tightening publicly-funded fiscal environment (Knight, 2015; Wu & Naidoo, 2016; Sá & Sabzalieva, 2018). Using British Columbia as a provincial example in Canada, according to the Canadian Centre for Policy Alternatives, “higher education in British Columbia has always been funded with a mix of government spending and student tuition fees, but over the last decade we have seen an increasing reliance on tuition fees and other private sources of funding for education” (Ivanova, 2012). In 2014, Culbert observed that in British Columbia (BC), “the advanced-education budget is projected to fall from \$1.952 billion... to \$1.911 billion by 2016/17, a continuation of the government’s goal of reducing funding for universities and colleges by \$50 million annually” (Culbert, 2014). In a February 2017 letter responding to the BC government budget announcement, the Confederation of University Faculty Associations (CUFA) of British Columbia declared that “BC’s research universities have suffered cuts of close to 5% over the past 5 years to core operating budgets” (CUFA, 2018).

This trend of reduced operating funds has required university administrations to be increasingly strategic in sustaining the financial wellbeing of their respective institutions. One of the outcomes of this is that universities have turned their attention to full fee-paying international students to generate revenue and add diversity (Ross,

Heaney & Cooper, 2007). In Canada, international students (who do not hold Canadian citizenship or permanent residency) pay a higher tuition fee for undergraduate degree programs, which are assessed with the exclusion of direct government subsidy – hence, they pay full fees which are not partially subsidized by the government. The extent to which universities assess higher tuition fees (beyond the government subsidy) for international students varies from institution to institution. Conversely, domestic students pay a tuition fee that is subsidized by government taxes allocated to Canadian public institutions for a prescribed number of domestic student spaces. The result is tuition fees for international students that are three to four times higher than domestic student fees (Anderson, 2015). In the context of the global student mobility trends described earlier, this presents one way that Canadian institutions may offset budgetary challenges while also seeking top talent in Canada and around the world.

In order to achieve enrollment and diversity goals related to international students, institutions have increasingly invested in international student recruitment and marketing efforts (Wu & Naidoo, 2016). The challenge is that in Canada, the US and around the globe, it is “increasingly common and necessary for institutions – both public and private – to search for alternative sources of income” (Knight, 2007). This brings heightened competition among universities who are pursuing similar enrollment and diversity goals.

In addition to these external resource and competitive pressures, public research institutions must become increasingly efficient and entrepreneurial in the way they operate and engage with the pool of globally mobile students. This invites more business-oriented approaches and the adoption of sophisticated systems to help institutions compete. KM in organizations, done well, can be a source of competitive



advantage (Grant, 1996; Halawi, Aronson and McCarthy, 2005; Cruywagen, Swart & Gevers, 2008; Hislop, 2013; Makani, 2012). As such, KM is of potential interest to university student recruitment departments aiming to improve their competitive position.

This scan of the literature on KM reveals that there are many issues that surround KM implementation in organizations, and highlights the importance of the preparations and considerations that must be made prior to implementing a KM initiative.

### **Research Questions**

The original direction of this research is on how organizations can better harness and use collective knowledge to potentially improve the effectiveness of employees through knowledge management (KM). While KM has promise in theory, there are challenges when it comes to its implementation. The success of KM implementation likely is dependent on a multitude of factors that exist in organizations. Some of these factors may emerge as barriers during an implementation process, which can impact whether KM is successful or not. This research seeks to understand the factors that may impact the success of KM. Understanding these factors in this pre-implementation phase may allow an organization to address barriers to KM implementation to increase the likelihood of success. This research seeks answers to the following question: what factors are important to consider in the pre-implementation phase of a KM initiative?

## **Methodology**

### **Selection of Methods**

The literature outlines that the study of knowledge management (KM), and the extent to which it can be successfully implemented, is highly variable and dependent on an organization's context. Because of this variability, the researcher aims to take a process view of KM to deconstruct KM into components that can be examined. To do this, it makes sense to focus on the factors that affect implementation in a single organization using this deconstructed KM framework as a lens. The researcher will focus on a real-life work setting in a single organization, requiring a method that can deal with questions that are practical rather than theoretical in nature. This criterion led the researcher to choose a case study format.

The case organization would ideally rely on organizational knowledge that is shared in a distributed manner for its operations where having optimal access to such knowledge could be an asset to the organization's ability to improve its performance. The case organization would ideally be a manageable size for the project and reasonably accessible to the researcher – both geographically and in terms of the organization's willingness to be a subject of research. To improve the likelihood of being able to gain permission from an organization to conduct research, the researcher considered organizations where he had already established rapport. Therefore, the researcher's familiarity with the leadership at the international student recruitment department (IRD) and the potential relevance for KM led to its selection for this study.

The IRD is an organization that relies on the sharing of knowledge and information across a coordinated yet distributed model. The IRD is responsible for

promoting the university internationally to prospective international students and their families by serving them with information and advice based on their needs and interests. The IRD's ultimate goal of providing this service is to reach qualified full fee-paying students who elect to enroll at the university. This requires the department and its staff to be able to effectively respond to prospective international students by providing timely, accurate and effective service and information. To achieve this, the breadth and depth of knowledge required within the IRD is significant and evolving. For example, staff must understand the needs and concerns of prospective students that vary based on their backgrounds, such as their culture and customs, socio-economic status, religion and English language proficiency. They must also be able to accurately represent a changing university and speak to its evolving programs and services, policies and processes.

Using a case study format, and considering the focus of this project, the researcher plans to use a cross-sectional approach to capture the perceptions and attitudes in the organization at a point in time – prior to the implementation of a KM initiative. This study addresses the research question by examining attitudes and issues prior to designing and implementing a KM initiative.

The research will try to develop an understanding of IRD staff perceptions about the potential for, and concerns about, the role of KM within its organization. Research methods used should be able to draw out perceptions and attitudes from IRD staff about some aspects of KM and whether they perceive that KM could work in their environment. Additionally, as the nature of the topic would be relatively foreign to the organization, it would be important that the method allows for exploration. These criteria align with

using a qualitative approach to research where the objective is to explore, interpret or gain a deeper understanding of an issue (Greenhalgh and Taylor, 1997).

The next consideration is to establish which qualitative method to use. Focus groups, intercept surveys, face-to-face interviews and questionnaires can address beliefs and attitudes of individuals through different types of interviews or questionnaires (Merrigan, Huston and Johnston, 2012). For an exploratory study on how IRD staff members view KM, a focus group could be a suitable method. Focus groups allow an efficient cross-sectional approach that is exploratory in nature, allowing for generative discussion which would be useful with participants who are most likely new to the topic of KM. Focus groups are helpful in gaining participant perspectives on a particular concept and facilitates brainstorming in a way that encourages participants to disclose information (Bradford, Meyers & Kane, 1999). This is helpful, particularly in a study that is focusing on organizational knowledge, which requires people to work together on issues. For the purposes of this project, this group approach to the research suits its more practical nature.

For this project, the questions would need to allow for exploration of the topic while covering some set points of interest. Being too structured may stifle participation so it would be ideal to be able to guide participants through the topic but allow some flexibility to follow a conversation. For these reasons, a semi-structured interview format seemed appropriate and aligns well to the nature of focus groups.

Having established a focus group format with semi-structured interview questions, the researcher felt it would be beneficial to obtain some baseline information about the participants, such as their situation within the department, as well as which

campus they are based at, or if they don't work at one of the campuses. This may help to contextualize responses later. Additionally, rather than having participants show up to a focus group without prior exposure to the topic, it would be ideal to have a pre-focus group exercise that would act as an icebreaker, while also collecting their early perceptions. A questionnaire format allows the researcher to meet these needs and can be compartmentalized from the focus group as a separate exercise.

The types of data the questionnaire would assist in obtaining would be varied. As mentioned, it may be helpful to know the level of participant experience, their geographical context, as well as their initial understanding of the topic, including perceptions and attitudes. To collect such data, a blend of open-ended and closed-format questions will be employed, which is detailed in the survey section below.

### **Incorporating the Massingham Study**

In order to examine the separate components of KM, the researcher was interested in finding tools that could support this. In the literature review, KM tools in organizational contexts were found. This allowed the researcher to use a framework that has previously been developed and could provide an opportunity to determine whether any themes emerge about the considerations around implementing a KM initiative. The Massingham (2014) study presented a model that could be a good fit for this project. He conducted empirical research on the implementation of KM tools that seemed relevant to this case study.

There were a few reasons why Massingham's study fits this research. First, the second half of Massingham's study was based on a process view of KM, which is in alignment with Alavi and Leidner's KM framework (KM as "creating, storing/retrieving,

transferring, and applying knowledge” (2001, p. 114)) used for this study. Second, the nature of part of Massingham’s study focuses on KM implementation issues that relate to the research question for this paper. Finally, Massingham’s study provides thorough descriptions of the KM tools used in his study as well as the perceptions and attitudes of participants, which could be a useful reference for developing discussion questions for this study. On account of these elements, Massingham’s model was used as a framework for this study. The specific research in Massingham’s study will be addressed as a separate case study and will be used to inform the case study being researched.

Among the total of 39 KM tools that make up 8 differently-focused KM toolkits in Massingham’s (2014) study, there was one toolkit in particular, known as the *knowledge preservation toolkit*, that suited the researcher’s planned research for this study. This *knowledge preservation* toolkit focuses on “[creating] value through increased accessibility to stored knowledge” (p. 1106) and contains four individual KM tools: *select process*, *storage process*, *metadata process* and *lessons learned database*. Each of these tools hold a different purpose but collectively contributes to preserving and providing access to knowledge in an organization. Appendix A provides descriptions of the four KM tools. These tools would be used to frame this research. The intention is to use the tools to guide the research and explore participant perceptions and attitudes towards KM components. It is hoped that this would help reveal factors and considerations from the perspective of participants that may need to be addressed prior to attempting a KM system implementation.

### **Participant Selection**

The plan for this research was to use participants from within the department

being studied. In this case, the participants were selected from an organization that is a relatively small pre-existing group, small enough that everyone knows everyone, so the nature of the research provides constraints. Using pre-existing groups comes with advantages and disadvantages. For example, “Krueger is critical of the use of... pre-existing groups, and urges caution when using groups of people who know and work closely with each other” (Freeman, 2006, p. 493). Conversely, according to Kitzinger (1995), “it can be advantageous to bring together a diverse group... to maximize exploration of different perspectives within a group setting” (p. 300). Kitzinger contends that “colleagues can relate each other’s comments to incidents in their shared daily lives” (p. 300). From the researcher’s perspective, the advantages of using a pre-existing group for this study outweighs the disadvantages.

With a focus on exploring perceptions about the potential value of KM practices in the IRD and how they might improve the creation, storage and transfer of knowledge across the organization, the researcher is interested in obtaining viewpoints of individuals that represent particular aspects of the organization. The geographic distribution of the IRD is an important characteristic of the department and how it operates and, therefore, this should be reflected in the selection of participants, since their realities around KM may be different based on their location and job requirements. Additionally, staff in different sub-units have different realities with respect to the types of knowledge and information they work with and need access to. Similarly, staff with different levels of tenure and position types at the department may have different levels of knowledge, and varying ideas about how they prefer to engage with knowledge and information. These factors of geography, sub-unit membership, tenure and position types will be factored

into participant recruitment.

### **Focus Group**

The focus group questions (Appendix D) were designed to be structured into three different phases: introductory questions, questions about KM tools that relate to components of KM, and summarizing questions.

First, after completing a brief survey, the focus group questions are introductory in nature as a way of introducing KM as a topic in general to the group. This would act as a further warm-up to build rapport with the group and help participants to settle into the discussions. However, it would also be an opportunity to gain insights from the participants on how they individually view the management of knowledge within the IRD context at present. From there, the group would need to be introduced to the idea of KM tools, as a means of discussing some of the components of KM using Massingham's tools as examples, and explore whether participants could envision implementing such tools in their workplace. The researcher planned to verbally explain to participants what KM tools are and then introduce them to the descriptions of each of the four KM tools being used as examples. The descriptions would also be projected onto a screen so both in-person and remote participants could read and re-read the description as they are being discussed as hypothetical examples. These questions were planned to elicit the participants' attitudes about the value of such tools, as well as whether they perceive barriers to implementing such tools at the IRD. For later comparison, and to set up a summarizing discussion, guiding questions across the four example KM tools would be consistent.

Following in-depth discussions about KM tool examples, it was thought to be useful to pull back and ask questions that allow participants to reflect and provide overall



impressions of KM tools and the opportunities and challenges they present in the IRD environment. This range of questions fall into three broad groupings for the focus group: introductory questions, KM tool questions and summarizing questions.

#### **Introductory questions.**

Semi-structured questions were planned to be used throughout the focus group as a way of facilitating discussion on a topic that will likely be new to the focus group participants. The first section included three open-ended introductory questions similar to those in the survey to help warm up participants for discussion. These questions are primarily about allowing the participants to get acquainted with the topic of KM before diving into the main section of the focus group. The introductory questions in the focus group build upon questions two, four and six from the survey.

#### **Knowledge management tool questions.**

The introductory questions were planned to be followed by an introduction to the four KM tools from Massingham's (2014) research. These tools were selected as a framework to discuss some of the components of KM that the researcher felt could be relevant to this study. The *select process*, *storage process*, *metadata process* and *lessons learned database* tools were designed to facilitate the KM components described in Alavi and Leidner's (2001) framework – knowledge creation, storage, transfer and application. For example, *select process* focuses on identifying what knowledge to capture – a tool used to foster the creation of knowledge in an organization. Meanwhile, the *metadata process* tool focuses on how to make stored knowledge accessible, which relates to the KM component of knowledge transfer. These tools allow a more accessible means of discussing the components of KM and the issues and considerations that come up for

participants. For each tool example, participants would be asked what they would foresee as the potential value of, and barriers to, implementing the tool within the IRD. As explained elsewhere, these questions would be preceded by an explanation of what each tool is designed to do (see Appendix A for descriptions) to help bridge the conversation.

### **Summarizing questions.**

The summarizing questions include open-ended questions designed to gather the group's overall perception of the tools for managing knowledge in their organization, and to compare the tools against one another for their value and ease, or difficulty, of implementation in the IRD. These last questions relate to common criticisms of KM – that knowledge can't be managed, that KM is difficult to implement and does not necessarily improve organizational performance (Massingham, 2014). It is hoped participants will reveal whether they have similar concerns in the context of the IRD.

### **Survey**

The survey (Appendix E), to be conducted at the beginning of the focus group, was designed to provide a secondary source of data and to get the study participants thinking about KM in general and within their organizational context. Additionally, the survey would help the researcher collect baseline information to gauge the participants' awareness and attitudes of KM prior to the start of the focus group discussions. Having a snapshot of the participants' perspectives on KM beforehand allows for the ability to look back after the focus group to see if the discussions in a group format were consistent with the surveys or not, and possibly, if opinions might have changed. However, it is anticipated that there will be different responses given the differences between the methods. Mainly, the survey would act as an icebreaker for the focus group to get

participants thinking about KM in the context of the IRD. With this in mind, the survey will be intentionally limited in terms of the depth and complexity of the questions as it is anticipated that the participants will not have encountered the topic of KM. Questions about specific KM tools such as those from Massingham's study will not be included as the researcher felt these needed to be introduced in the focus group portion of the study so that these concepts could be more thoroughly introduced.

The top of the survey asks participants to indicate their office location by campus or if they work remotely, as well as the number of years they worked with the department. These questions were asked as they may provide context to the responses in the survey or later in the focus group discussions. Including these questions will also indicate whether the distribution of these two aspects is representative of the department.

The first questions of the survey were designed to gauge each participant's understanding of what KM is in general (an open-ended question) as well as in the context of their workplace (asked to provide an example). These two survey questions were designed to provide a point of comparison to similar questions asked in the focus group. The next questions are semantic differential formatted questions aimed at understanding the participants' perceptions of how know-how, experience and knowledge is currently managed in their organization. The questions were included to try to gain a general sense of the extent to which knowledge is managed in the IRD and whether participants are aware of, have access to and know where knowledge resides in their department. The question that followed attempts to assess how much value participants place on knowledge. Understanding value can be important particularly in a study that includes the topic of implementing something that may require work on the part of

participants. The final question was intended to gauge how much thought each participant places on issues related to KM to indicate whether KM is an active concern among participants. These last two questions also use a semantic differential format in order for the researcher to measure individual attitudes across the group about the value of and concern for knowledge in their workplace.

The survey was to be conducted by paper and administered by the researcher in person at the beginning of the focus group. For those individuals participating via video conference, electronic copies were to be distributed in advance of the focus group via email, which they would have to self-administer and scan and email the completed copy to the researcher. Once the completed surveys are collected, the results would be anonymized and tabulated in a spreadsheet that summarizes the responses for analysis.

### **Focus Group and Survey Logistics**

The intention was for the initial survey to take ten minutes to complete prior to the focus group session, which is designed to take approximately 70 minutes. The researcher's aim is to secure between six to eight participants that are representative of the broader department in terms of geographical distribution, gender balance, position types and years of experience with the case organization. Up to twelve carefully selected participants will be contacted directly by email with an invitation letter (Appendix B) to participate in both the focus group and survey. After receiving confirmations from prospective participants, several dates and times for the focus group were to be proposed using Doodle with a hidden poll so that participants could not view each other's information. The date and time selected were to be made to ensure the most ideal number of participants combined with the most representative combination of participant

locations, gender balance, position types and years of experience possible.

Four or five participants were to be physically present for the survey and focus group session and two to three participants via videoconference for the same focus group from two different locations. It was planned for the participants to receive an Information Letter and Consent Form (Appendix C) by email prior to the focus group for their review. Those attending via videoconference would be required to sign the form, scan it and email it back to the researcher prior to the start of the focus group, while those attending in person would provide their signature at the start of the focus group session. The focus group will be audio recorded for later transcription and analysis.

### **Plan for Data Analysis**

This is an exploratory study with mostly qualitative data and there are two main areas for analysis: the findings from the survey and the focus group discussions. For the sections that deal specifically with Massingham's KM tools, the findings from his 2014 study will be used as a point of reference.

The survey data will be anonymized and collated in a spreadsheet allowing a view of individual responses which will then be aggregated numerically for questions structured on a semantic differential scale and thematically for the others. The focus group transcript will be scanned for general themes within each question and throughout the full transcript. Additionally, the portion of the focus group transcript that covers Massingham's KM tools will be a) assessed for general perceptions of participants within the IRD context, and b) compared back to the findings from Massingham's study to see if there are any similarities or differences between the two organizations. Finally, the survey responses will be used to add context to the focus group discussions.

**Ethics Approval**

This was a multi-jurisdictional ethics application as the participants for this study were based at another Canadian public research university. Therefore, following an application to the Research Ethics Board (REB) of the University of Alberta, a truncated ethics application was submitted for review and eventual approval by the REB at the institution where the IRD is based. Key issues that had to be covered in the ethics application were to detail how the anonymity of the survey and focus group participants would be assured, as well as detailing how confidentiality and privacy of information of participants would be maintained with respect to the storage, retention and eventual disposal plan of the data related to the research. These details would be presented to participants within the Information Letter and Consent Form (Appendix C) for the review and signature of each participant. Based on the content and nature of this study, it is defined as “minimal risk”.

### **Findings**

Six IRD staff or representatives – four female and two male – participated in a survey and focus group that occurred in March 2018. The survey results were tabulated in a spreadsheet (Appendix F) and the data was anonymized to ensure the privacy of participants. Similarly, the almost 80-minute focus group session was audio-recorded and anonymized in the transcription (Appendix G) and in any direct quotations for the purpose of this paper.

Participants included individuals that, for the most part, reflected the international student recruitment department's (IRD) geographic distribution, sub-unit membership, tenure and position types – organizational aspects of interest during participant recruitment. Four participants were based at the larger university campus, while one was from the smaller campus and one was based off-campus (outside of Canada). Three of the six participants have worked at the IRD for one to five years, and the other three have worked in the department for six to ten years. It was originally intended that one participant would hold 11-15 years' experience in the IRD, but this did not occur.

In terms of position type, there was one manager, four international student recruitment officers, or recruiters, and one associate international student recruitment officer, or associate recruiter. Recruiters have at least two years' experience while associate recruiters have up to two years' experience. The plan to have a participant at the senior management level, such as an associate director or director, which did not occur.

Participants from three of the eight IRD sub-units attended the focus group and survey. Four of the participants originated from direct student recruitment teams (who

travel abroad to meet prospective students) and two from the on-campus recruitment team (who meet with prospective students visiting the university).

Finally, one of the participants scheduled to attend in person attended by video conference from home, making the number of in-person and remote participants equal.

### **Focus Group**

The focus group was broken into three main areas of discussion: 1) introductory questions regarding knowledge management (KM) in the context of the case international recruitment department (IRD); 2) an introduction to and discussion about four of Massingham's KM tools and the opportunities and challenges of applying them to the IRD; 3) summarizing questions about participant perceptions of Massingham's KM tools in relation to each other. The presentation of these findings follow the order of discussions as outlined above.

#### **Introductory questions.**

#### ***Knowledge management in the case study organization.***

When asked about the tools or methods used to manage knowledge in the IRD, the focus group participants began by referencing technological repositories such as the department's shared drive and internal wiki. The group then introduced meetings and "talking to people" as knowledge resources. One of the participants explained that their team had discussed the idea of creating a platform that would profile the expertise and knowledge of each staff member because "it's hard to... figure out who has what knowledge". This idea has not been developed and, in the meantime, staff turn to their colleagues to figure out who to reach out to for particular knowledge or expertise. The bulk of this discussion focused on the ways staff interact with each other and rely on



interpersonal means of obtaining or transferring knowledge. For example, one participant indicated that getting to know staff they do not normally see or work with was valuable. Another explained how they take into consideration the departmental hierarchy and sub-unit structure when seeking particular knowledge or information – for example, starting by approaching staff at a similar position level within a sub-unit before going to a higher level or to a colleague from another sub-unit or location.

***Access to knowledge in the IRD.***

The participants were asked if know-how, experience and knowledge of IRD staff is accessible. One participant responded to this question in two parts indicating that “in-person access is definitely always there” but when it comes to technology-based repositories such as the shared drive, “I wouldn’t know what to look for, where to go, where to start.” This participant also suggested that if someone left it would be difficult to know what they knew – that the storage of this information is lacking.

The balance of discussion in this section gravitated again towards the interpersonal means of accessing knowledge through colleagues. In this regard, one suggested that a staff member’s geographic location may be a factor in accessing knowledge and that it can be difficult to know how your colleagues in a different location operate, and that you miss out on visual clues and other ways of understanding protocol. Another agreed that, for example, it is difficult to know how certain people like to be approached if you don’t work with them regularly, but this can be improved by opportunities to get to know each other in person.

***How would knowledge management be useful to the IRD?***

The group was asked how KM might be useful in their context and a participant started by suggesting it would be helpful to have a system or a plan in place for sharing knowledge since the IRD is a large team made up of people with varied jobs, expertise and backgrounds. It was suggested that having a KM system in place would be helpful in speeding up the training process for new staff members, for example.

The discussion then focused on how the IRD currently struggles with the volume of information and the number of knowledge repositories already being managed. This leads staff members to lose track of where certain knowledge or information is being stored and, in some cases, leads to staff resorting to just asking someone. Additionally, when staff are away from the IRD on business and they miss a number of meetings, there was concern about the volume of meeting notes that must be read to catch up and that chatting with a colleague was a more preferable way to do this.

Participants expressed that the current repositories lack searchability and that the information being recorded in meeting notes tends to change quickly so it is difficult to be confident that they have the latest information when consulting the departmental wiki or shared drive. One participant indicated that for ad hoc meetings, notetaking may not be completed or they may be significantly delayed – this was expressed as a particular concern by the participant not based at one of the university's campuses. Throughout this discussion there were comments that a solution was often to speak with a colleague rather than to rely on technology-based information or knowledge repositories.

**Massingham knowledge management tools.**

The findings from the focus group discussions will be clustered into each of Massingham's *knowledge preservation* KM tools as subtopical areas. For reference, descriptions of Massingham's KM tools are available in Appendix A.

***Select process.***

The *select process* KM tool, designed to identify what knowledge to capture (Massingham, 2014), was introduced and the conversation opened with a participant explaining that it can be difficult to know what information or knowledge others might need and that it tends to be a trial-and-error process of learning what to capture. One of the participants suggested "I think sometimes what's relevant needs to be a bigger discussion" adding "what I think is relevant may not be exactly what someone else is looking for at a different level". Another said you have to "remember what you already have as innate knowledge", and that this may affect what knowledge each person captures or chooses to share. Additionally, the observation that information is constantly changing, was repeated here.

When asked about the barriers related to implementing a *select process* tool, the group reiterated the need to sort out what is considered to be relevant would be important. There was some debate about possible solutions – one suggested that standardization of what is considered relevant in each area would need to be implemented, while another felt this would be difficult to achieve as there would need to be multiple versions of standardization resulting in substantial additional work. For example, for trip reports in the US versus China and all other countries the IRD members travel to, there was some debate among participants between creating a single standardized report template and having templates that could be customized regionally or by country.

*Storage process.*

The focus group was introduced to Massingham's next KM tool in the knowledge preservation toolkit: *storage process*. This tool was described to the group as being focused on ensuring participants understand how best to store knowledge so that it is accessible and actively used by others (Massingham, 2014). When asked about the *storage process* in the IRD context, this generated a varied response. One suggested that metatagging notes when adding them to the wiki would help, while another outlined the need for a standard vocabulary for notes or file names so they show up properly in searches – recording US versus USA was used as an example. Another suggested an idea of changing the way they report and update information in the departmental wiki following recruitment trips. For example, to develop wiki pages by city rather than conducting template-based trip reports.

Inconsistencies in how files are stored was also highlighted as a challenge when looking for something related to another subunit in the department. An example given was the structuring of files by geographic location versus chronological order – each subunit may organize their files differently. When asked further about needing to find information from another departmental subunit, one person said “I go upstairs and ask”, followed by another who said, “exactly, oh 100%. I wouldn't even try.” Another participant explained that the shared drive provides a great historical reference for the department, but it is in need of archiving.

Despite the comments about the ways in which the current approaches to storing knowledge and information need to be addressed, or the new ideas for recording information, the participants also recognized that those improvements would require both

some added initial work to set up these new approaches, as well as additional time to record information and knowledge in a way that would be more accessible. They also recognized that with some of the systems that have been created in the past, sometimes these don't get utilized in the end.

When asked about any additional obstacles that would challenge the implementation of a KM *storage process* tool, one participant mentioned that they already feel like they are repeating data entry in multiple repositories referencing that this can be laborious. The observation that everyone thinks differently was outlined as an obstacle by another who suggested again that standardization across the department would be helpful.

***Metadata process.***

This next tool called *metadata process* was introduced to the focus group participants as a process that provides context and meaning of the data represented by a knowledge repository; a system that draws in data from a range of sources and focuses on how to make the knowledge stored accessible (Massingham, 2014).

When asked about the potential value of implementing a *metadata process* KM tool, the participants responded quickly that it would be faster and easier to find information and the responses stopped there. The participants were then asked about the barriers that might exist for implementing such a tool and the time and processes required were raised as a concern. One suggested "it would have to be very simple... because... retraining everybody to actually do it would be really difficult". Another added that smaller implementations like this, that may be seen as an add-on task, are less likely to

get buy-in than larger department-wide initiatives where everyone has to adopt a new way of working and thinking.

It was also suggested that the value of the time and effort required to properly record information and knowledge can be undermined if they are not being referred to, or if colleagues rely on asking each other instead. Similarly, one commented that there is less incentive to make note of information that is not relevant to other people. However, the same individual also noted that if information were properly entered so that it was more searchable, people would be more likely to seek it out.

***Lessons learned database.***

The *lessons learned database*, the last of the four KM tools in Massingham's knowledge preservation toolkit, was described from Massingham's (2014) paper as being based on the "principle of sharing experience so that mistakes and duplication are avoided" (p. 1107). The tool is used as a subset of organizational memory where stored information from past experience is used to inform present decisions and actions. It was explained that this tool includes both the process of capturing lessons learned and the design of the database, and that the tool is intended to preserve experience.

The group was asked what potential value they would see with a tool like this and one participant explained how their sub-unit conducts a post-event debrief to discuss what worked and what did not work, which they capture in a document called a transition report. When probed about whether this could be something applied more broadly, participants had varied responses as to whether this would be feasible. One participant thought it would be difficult to apply broadly because each area of the department is so unique. Conversely, another suggested that there could still be some general best

practices that all staff adhere to. The discussion reverted back to the possibility of applying a lessons learned approach in more specific contexts. One presented examples of “traffic in Los Angeles or... Uber drivers in Brazil” as well as knowledge about particular courses in targeted high schools the IRD visits and recruits students from so that this could be shared with the admissions department. This segued into the topic of knowing who to contact in admissions or a faculty within the university and that this could be incorporated in a *lessons learned database*.

When asked about the barriers to introducing a *lessons learned database*, one participant said “using it” and ensuring that people would go back to read the contents. Another reiterated the need for such a tool to be very specific to be useful.

### **Summary questions.**

#### ***Value of Massingham’s knowledge management tools.***

Participants were asked how the four KM tools introduced to the focus group would be useful and, in particular, to share which of the tools they view as most and least valuable. The participants chose to focus more on the topic of which tools would be most valuable. One participant started by suggesting *storage process* and *metadata process* would be the most valuable – “something that cuts down the time to find the information we’re looking for”. Another suggested combining *storage process* with *metadata process* – a blend of the two. A third participant preferred *select process* and ensuring the relevancy of information saying “if the information stored is... useless, then it doesn’t matter if I can find it or not.” The same individual also suggested that the *lessons learned database*, of the four tools, would be nice to have but the department could survive without it.

***Knowledge management tool implementation barriers.***

The focus group members were asked to outline what they would consider the most likely implementation barriers for the four KM tools that were introduced to them. They were then asked which tools would be the easiest and most difficult to implement. One participant began by suggesting that the time required of each individual to put these tools into practice would be the biggest barrier. Another agreed that time was a barrier along with getting buy-in from colleagues across the department.

Despite the above barriers, one participant suggested that *select process* would be the easiest KM tool to implement, using the example of creating a template to help with capturing information. Another agreed that *select process* would be easiest and added that there needs to be more standardization.

**Transfer of experiential knowledge.**

The group explained how knowledge about travelling in certain regions is widely available among colleagues, but often not formally explicated in the form of trip reports or other resources. One participant gave the example of going for coffee with a colleague to discuss clothing that would be culturally appropriate for a female travelling in particular regions of Africa. At the IRD, this tends to occur as a more informal exchange of information among immediate colleagues, unless instructing colleagues from outside of the department – for example, advising a faculty member in advance of joining an IRD trip to Malaysia about cultural dos and don'ts.

**Issue of not knowing.**

Participants discussed their perception that there is a lot of knowledge among colleagues within the department, but it is often the case that individuals don't know what



they themselves don't know, as well as not knowing what other colleagues know. One participant felt this was an area that neither they nor the department as a whole had taken advantage of in order to do what they do better. Another participant agreed and added that this also contributes to not knowing what to share. They observed that often the knowledge or information that is valuable may seem very insignificant, but can have a large impact on performance or productivity. An example used was one participant learning how to search for prospective students by school, which saved them approximately 50% of the time it would normally take to look up candidates in their region. This participant also expressed that the opportunities for information like this to be shared do not happen very often. Another suggested the departmental retreats are opportunities for this kind of information exchange, but the documentation of topical sessions in those retreats need to be executed in a timelier fashion as this has sometimes been delayed or not completed in the past. It was also acknowledged that there are many conversations that occur in the office environment, but colleagues who work remotely do not have access to this so information may not get passed along.

#### **Focus group participation observations.**

The participants were engaged in focus group discussions for over 75 minutes. Just over half of the conversations were conducted by two participants, both of whom were in-person participants of the focus group. It is unclear to the researcher whether location was a factor, or if the two participants were simply more apt to speak than the others. The researcher prompted those participants who were less vocal.

#### **Survey**

The staff within the case international student recruitment department (IRD) had not previously been introduced to knowledge management (KM). While it was originally planned that remote participants would receive surveys just prior to the scheduled focus group session, the surveys were sent the day prior to allow participants the time to print the surveys and then complete, scan and email them back. All three remote participants submitted their survey responses before the start of the focus group session. The remaining three participants completed hardcopy surveys in person at the start of the session. Anonymized survey responses are tabulated in Appendix F.

### **Participant descriptions of knowledge management.**

When asked about the meaning of knowledge management, all survey respondents indicated that KM involves the handling of information. Half of the participants added “knowledge”, “skills” and “knowing who is an expert on certain topics” as elements of KM. Another common term used in relation to knowledge management was the act of “sharing” or how information, knowledge and skills are “shared”. In addition to sharing, participants suggested knowledge management includes the “storage” of information and one individual included “gathering... information” as a function of KM.

### **Storing and transferring knowledge.**

Participants were asked to share an example of storing and transferring knowledge. All participants responded to this question referencing technology-based tools, particularly the “shared drive” or “wiki”, as well as individual references to email, the Customer Relationship Management (CRM) system and trip reports. One of the six

participants included “team meetings” as the only non-technological form of capturing and sharing knowledge.

**Participant perceptions of knowledge management in the IRD.**

The survey included five semantic differential questions, asking participants to provide a rating on a scale of one to five (one being on the low or negative extreme; five being on the high or positive extreme) to gain a general understanding of participant perceptions of knowledge and KM-related topics within the IRD.

Participants placed the importance of having access to departmental knowledge on a day-to-day basis higher than all other responses. Apart from this all responses were neutral (within the score around three) when participants were asked about their level of awareness, access to and ability to find knowledge within the IRD. They were also neutral when asked about the extent of thought they had given to issues related to knowledge management.

### **Discussion**

The discussion section includes four broadly grouped subcategories: a) observations and outcomes related to the planned study methodology, b) general themes that emerged from the findings of the survey and focus group and how these relate to the literature, c) case international recruitment department (IRD) participant perspectives on knowledge management (KM) components introduced using tools from Massingham's *knowledge preservation* toolkit, and d) limitations of the study and recommendations for future research.

#### **Outcomes of Planned Methodology**

Overall, the survey and focus group went according to plan. The number of participants and their geographic distribution allowed for the group to be cohesive as a pre-existing group, yet diverse enough to bring unique viewpoints to the discussion. Additionally, the researcher's previous affiliation with the case IRD and the advantages and disadvantages will be discussed as a factor in the focus group portion below.

#### **Participants.**

When considering the participant recruitment process, the researcher knew the IRD as a department in which most staff are familiar with each other and actively work with one another. This allowed a good foundation for ensuring participants would be likely to feel comfortable with each other, or at least have a shared understanding of their collective work, and engage in active discussion during a focus group – and this did occur. With this commonality as a baseline, the researcher sought a diversity of participants who might experience different realities when it comes to their need for, and ability to access, departmental knowledge and information across the IRD. The diversity

aspects of interest were related to the geographic location, IRD sub-unit or team membership, position type and tenure of each participant. For the most part, these aspects were represented in the focus group – particularly geographic location.

Having perspectives of participants from the different IRD locations highlighted variations in how staff engage with departmental knowledge resources. For example, a remotely located IRD representative seems to be more reliant on knowledge repositories as they do not have the ability to directly engage with colleagues as easily as others. Similarly, the participant from the smaller campus indicated they tend to rely on their immediate colleagues first, rather than those at the larger campus or those based remotely. It seems that the geographic location of staff in the IRD may have implications for how each person creates, stores, retrieves or transfers knowledge. This can potentially lead to inconsistencies in how different parts of the IRD operate or make decisions if the basis of knowledge in each location is different. It also could limit the diversity of knowledge that any one geographic group has access to – a factor for consideration according to Grant (1996) who emphasizes the need for integration and coordination of knowledge among diverse specialists.

Due to the sub-unit origins of four of the participants coming from regional student recruitment teams, the nature of the discussions and perspectives on the components of KM may have been dominated by direct student recruitment related interests. While student recruitment is the primary mission of the IRD's operations, having the presence of some of the other sub-units might have presented different issues to the discussions.

The absence of senior management (at the level of associate director or above) meant the profile of the group was more operational in nature. Though not intended, in retrospect this was potentially advantageous. According to Kitzinger (1995), “it is important to be aware of how hierarchy within the group may affect the data” (p. 300), where the presence of more senior levels can inhibit those at more junior levels.

#### **Videoconferencing effects.**

The findings indicated that almost two-thirds of the discussion during the focus group occurred among the three in-person participants. It is difficult to know if the participants attending the focus group virtually would have engaged to a greater extent if attending in person or if it just so happened that the in-person focus group participants are generally more talkative. The format of the focus group delivery involving a blend of in-person participants and video conferencing others is similar to the way the IRD operates. In this way, this format was an authentic approach for learning how KM might work in this setting.

#### **Researcher affiliation with IRD.**

The researcher’s affiliation as a former employee of the IRD presented some advantages to the study by providing a source of personal curiosity on the topic, as well as garnering support from the IRD and easing the participant recruitment process. The familiarity of a peer as the researcher can allow participants a degree of vulnerability that can lead to rich, intuitive responses (Chew-Graham, May & Perry, 2002). However, there are also some risks and challenges that come with this type of affiliation when conducting a focus group. For example, such affiliation can cause blindness to aspects of discussion that would not be missed by researchers with a different background (Abildsnes, Flottorp

& Stensland, 2012). The researcher may have held assumptions about the IRD and this may have affected the study design, execution of the focus group, and the interpretation of the data. It is also possible that, due to the researcher's background with the IRD, he may not have asked for clarification of certain terminology used during the focus group. Additionally, the researcher may interpret data differently due to the history with the department. Therefore, there is the potential for additional bias or preconceptions made by the researcher.

### **General Themes**

The general themes that emerged in this study include early insights into how the IRD might understand KM and its components, advantages, and challenges. The findings present factors that should be considered prior to the implementation of a KM initiative.

#### **Understanding knowledge management.**

To the best of the researcher's knowledge, the participants were not familiar with formal definitions and descriptions of KM prior to this study. However, the findings revealed that when participants were asked to describe KM, they made reference to "how information is shared", or "ways of gathering, sharing and storing information" as well as having "access" to information. While not formal, the collective responses of participants align closely with some of the components of KM that reflect Alavi and Leidner's (2001) summary of literature on KM as consisting of the four main processes of creating, storing/retrieving, transferring, and applying knowledge. Of these, most of the participant discussions relate to creating, storing/retrieving and, to some extent, the transfer of knowledge, and minimally to applying knowledge. For their context, these components of creating and storing/retrieving knowledge were of relevance to the participants.

**Knowledge management behaviours in the IRD.**

In the survey, participants almost exclusively spoke to technology-based means of storing and transferring know-how, experience or knowledge within the department. Participants expanded on this during the focus group discussions to explain that while there are various technology-based knowledge repositories that are used in the IRD, such as the shared drive, departmental wiki and Customer Relationship Management (CRM) system, they often rely on colleagues for knowledge and information. Participants expressed greater confidence in relying on colleague interactions than they did on the content stored within existing KM repositories. This is to say that the participants tend to reach out to one another instead of sifting through the existing repositories and wondering whether the knowledge or information in the repositories are current. As the findings indicated, their reasons for why they struggled to extract knowledge and information from departmental repositories were varied but mostly related to a lack of searchability, lack of a standardized filing structure and lack of time. It is understandable that staff would be inclined, under these circumstances, to reach out to colleagues as a more accessible resource.

There are at least two main issues with the above situation. First, it may disadvantage those staff who work either in smaller sub-units of the department or who do work for the IRD remotely, as they may not have the same level of interpersonal access to colleagues. Second, if staff continually believe that the repositories are not reliable sources of stored departmental information and knowledge, they may become less inclined to invest their time to contributing to these repositories to ensure they remain current. This represents an opportunity to narrow the gap between the value



placed on knowledge by staff and the factors that are preventing awareness, access or wayfinding to knowledge within the department. This lack of confidence in current systems, and understanding the impediments within, could be a factor that requires consideration prior to introducing a new system or set of KM tools to the IRD.

**Time concerns and timing.**

A consistent theme throughout the focus group among participants was the concern about the amount of time it would take to implement most of the KM tools introduced. While participants were keen on the concepts behind the KM tools and appeared to see their value and potential, the time required to get these tools up and running was specifically mentioned as a barrier in the discussions surrounding all four KM tools except the *lessons learned database*. Time was also noted by participants as the biggest barrier overall when considering the implementation of these tools. Participants also indicated that there is a relationship between the time that would need to be invested and the perceived level of value that would result from their effort. This implies that organizations such as the IRD would need to be able to show that there would be an adequate level of value for the amount of effort required by staff to implement such tools.

Participants made reference to the impending Customer Relationship Management (CRM) system that the IRD is in the midst of implementing – a multi-year project. This process along with the maintenance of the current CRM, the shared drive and the wiki during a period of ongoing departmental growth has placed time at a premium for many participants. Additionally, staff have been informed that the new CRM will involve significant training and changes to the way they do their work. It is possible, therefore, that IRD staff are, or will soon be, at risk of being exhausted by their

department's pursuit of new technology or systems that each require them to change how they do their work. Additionally, the participants may have been relating the discussions about KM with the process they are going through with implementing the new CRM.

This raises the importance of considering the timing of introducing KM tools in an organization vis-à-vis any other initiatives already in process. One of the participants suggested that "it's almost easier when there's a new big system like the CRM coming in where everybody's going to have to learn something new versus trying to get buy in to change something that you already currently do". To that end, it would be worth exploring whether KM tool implementation could be embedded into departmental or institutional initiatives. Alternatively, the IRD would need to assess the department's readiness to introduce a KM project to help mitigate the risk of implementation failure. Kalkan (2008) explains, "advanced systems improving technical capabilities are important... but they become useless and meaningless for the organizational knowledge-management process unless accompanied by cultural, structural and strategic progress" (p. 392). With the new CRM in its final stages of implementation (i.e. user-testing and staff training) at the IRD, it may not be the best time to pursue a large-scale KM system implementation until the department leadership indicates an interest in pursuing a KM initiative and is able to invest its full support as they did with the CRM project. In addition to IRD leadership buying into the value of a KM initiative, they would have to assess the extent to which the departmental staff would support such an initiative. This would require addressing some of the concerns and issues raised around time commitments and the effectiveness of existing KM-related systems.

### **Applying Massingham's Knowledge Management Tools**

The bulk of the focus group discussions for this project centered on the four KM tools that make up Massingham's (2014) *knowledge preservation* toolkit as a vehicle for exploring components of KM. The findings revealed that, among the components of KM introduced in Alavi and Leidner's (2001) framework that reflect the process view of KM – knowledge creation, storage/retrieval, transfer and application – the focus group discussions mainly addressed the first two of these four components. Therefore, this section looks at the KM components of knowledge creation and knowledge storage/retrieval in the context of the IRD.

### **Creating knowledge.**

Massingham's (2014) *select process* KM tool helped the researcher to explore the process of knowledge creation with focus group participants. This tool's function of facilitating the capture of knowledge on behalf of the organization was introduced as one way that knowledge can be created.

### ***Capturing relevant knowledge.***

The roles of the IRD participants are operational in nature and, therefore, these are individuals who both create knowledge to support their work and that of their peers, as well as the work of their superiors. When it came to knowing what was useful for their own work, the participants knew exactly what knowledge to capture. This practice, where users capture only what they believe is useful, can be an empowering approach (Zammit & Woodman, 2012). However, they expressed difficulty in knowing exactly what information would be relevant to others, particularly superiors.

In this sense, the knowledge captured and created by the IRD participants places these individuals as both end users and suppliers of knowledge to others. Placing the end

user at the centre of a KM initiative is ideal given their role in the successful adoption and implementation of a KM system (Zammit & Woodman, 2012; Chatzoudes et al., 2015). That said, the needs of the end users have to be taken seriously into account (Storey & Barnett, 2000). Given that these individuals are responsible for capturing and creating knowledge for the IRD, it is important that they are supported by being informed of what knowledge and information is considered relevant by others so they do not feel inhibited or uncertain while in the act of selecting which knowledge to capture for the IRD.

***Knowledge creation and standardization.***

In addition to knowing which knowledge is considered relevant, IRD participants, particularly the recruiters, expressed a desire to be able to standardize the the types of knowledge that are relevant for capture. Participants cited the fact that everyone thinks differently and felt standardizing the knowledge capture process would be a means of removing uncertainty about knowledge and information needs. However, there was concern that the knowledge needs across the department are so different that such standardization would be very difficult to achieve. In the IRD context, this factor would need more exploration to determine if this type of standardization is, in fact, desired and possible to achieve and, if so, what knowledge could be included in this process.

***Harnessing implicit knowledge.***

Participants noted that each individual possesses knowledge that they themselves may take for granted, particularly if it is not apparent that other staff rely on that information. For example, there may be one dedicated recruiter for handling all recruitment in the State of Illinois. The extent to which this recruiter captures knowledge for the IRD about their implicit and explicit knowledge of this particular market does not

necessarily impact their own work. However, it could make a significant impact on the IRD's performance if someone else were to be assigned to Illinois and they had access to such market-specific knowledge resources. To ensure this practice happens consistently, this would require the IRD to ensure there is a culture of creating knowledge across the organization, regardless of the reliance of others on an individual's area of work. More generally, "KM requires a major shift in organizational culture and a commitment at all levels of a firm to make it work" (Chang & Lin, 2015, p. 437).

### **Storing and retrieving knowledge.**

The tools used from Massingham's study predominantly helped to frame discussions related to the KM components of storing and retrieving knowledge. The *storage process*, *metadata process*, and *lessons learned database* all fostered discussion that related to the KM processes of storing the knowledge that has been captured, as well as improving the accessibility and searchability of stored knowledge. This section covers various considerations that emerged from the focus group findings.

### ***Storage and retrieval issues.***

Participants were clear about the ways in which the storage and retrieval of knowledge and information at the IRD needed improvement and they already had ideas for how this could occur. To start with, participants talked about the range of locations in which knowledge and information can be stored: the internal wiki, shared electronic filing system (shared drive) and CRM, among others. Depending on the type of information, it may require multiple entries into different repositories and when searching for information, it similarly requires a scan of multiple possible storage sites. Additionally, in the case of the shared drive, different sub-units can have different

approaches to how they organize their sub-folders. For example, for recruitment-related files, one team may organize by chronology while another organizes by geographic region. These multiple repositories and varied filing approaches can impact the time taken to both store and retrieve knowledge and information. As mentioned earlier, this has implications on whether individuals choose to use these repositories or just find an in-person source.

Searchability came through in the findings as a significant interest for IRD participants and they had already considered ways they could improve on their current practices. For example, participants discussed the need for a cross-departmental approach to shared drive file organization, and standard storing practices. Participants also felt it would be more effective to move away from static trip reports and instead create city profiles on the internal wiki that get updated by each person who travels to that market so that future travelers do not have to read multiple reports to plan their next trip. Metatagging of notes and reports was of interest to participants as they could see how this would benefit their ability to search for key information.

While the participants saw the clear benefits of making such improvements, the work and time required to make some of the changes, and the ongoing maintenance necessary to sustain these approaches were noted as a barrier. Participants also noted that staff would have to be able to consistently adhere to a strict set of guidelines such as vocabulary to use when metatagging or writing notes so that the searchability functions are effective. This is an example where, in theory, making improvements to knowledge storage and retrieval processes may be appealing, but organizations have to be prepared

to insist that its staff are able to maintain a strict use of vocabulary and organizational and filing order.

***Rate of change of information.***

The rate at which knowledge and information changes in the IRD is high. Participants noted this as an issue – namely that they can't always rely on the IRD's knowledge repositories because as soon as something is stored or recorded, there is new information that makes this redundant. This is why participants spoke to their reliance on direct communication with colleagues as a way of verifying the accuracy of stored information. This reveals the possibility that the rate of change of information being created in an organization can have an impact on the way in which stored knowledge is relied upon. Another factor to consider along with this is the way in which knowledge is stored – for example, format and technology considerations that could help allow for more synchronous, real-time updating. There may be system design implications for knowledge repositories in organizations that experience rapid changes in information.

### Conclusion

This paper is an exploration of knowledge management (KM) in the context of an international student recruitment department (IRD) in a Canadian university. A goal of this study was to address the following research question: what factors should be considered in the pre-implementation phase of a KM initiative? The researcher's interest in this study originated from his experience participating in a Customer Relationship Management (CRM) system implementation as an employee of the IRD. Understanding the factors that affect an organization's readiness for a successful KM system implementation was of greatest interest.

This case study was exploratory in nature and used a focus group with an initial questionnaire to obtain a cross-sectional view of the case organization – the IRD. The IRD and the global student mobility sector in which it operates experience constant change as they react to evolving international student recruitment markets. The IRD is a geographically distributed department where staff rely on a regular flow of knowledge and information that is shared among colleagues.

To facilitate the exploration of the factors that should be considered in preparation for a KM initiative, this study used a process view of KM using the framework described by Alavi and Leidner (2001), where KM consists of the processes of creating, storing or retrieving, transferring and applying knowledge. This study deals primarily with creating, storing and retrieving knowledge by using Massingham's (2014) *knowledge preservation* toolkit as a vehicle for discussion and question development in the focus group and questionnaire. This toolkit consists of four KM tools: *select process*, *storage process*, *metadata process* and *lessons learned database*. The use of these two constructs – the



process view of KM and Massingham's tools – proved to be useful in making KM a relatable topic of discussion for focus group participants who had not previously been exposed to KM as a formal subject.

Key findings from this research were that there are various factors that should be considered to ensure an organization is prepared for a KM system implementation. To start with, it is important to keep in mind that KM is a process and requires that people contribute to the practice of KM. This assumes effort and engagement and, in this regard, it is important to consider who will be affected by a KM system implementation (i.e. how it will change the way they do their work), and who will be relied upon to ensure the KM system thrives. The current attitudes and perceptions of staff about how systems and KM practices are working in their organization may impact how they view a future KM implementation. For example, the complexity of the knowledge repositories in the IRD often lead staff to feel it is faster to speak with a colleague than continue searching for information. From a staff member's perspective, how would a future KM system be different? Similarly, it is important to consider the extent to which staff feel they would benefit directly from their efforts to support a KM initiative and its ongoing maintenance. Depending on these perceptions, the organization may have to invest time and effort to understand and address concerns. This also depends on who in the organization is the driving force behind implementing a KM initiative – is it from the ground-up, or from the top-down or a mix? In the case of the IRD, the interest in pursuing a new CRM came from a blend of operational staff and leadership. Most felt they would stand to benefit from such a change and the efforts required of them. However, this may be different if it were an initiative driven primarily by leadership or, conversely, by operational staff.

Timing of a KM implementation should also be considered. The IRD participants suggested that it would be best to combine a KM implementation with other significant system implementations where staff are already undergoing a major shift in the way they anticipate they will be doing their work. For example, conducting a KM system implementation at the IRD immediately following the completion of the multi-year CRM implementation would not be as likely to succeed. While the IRD staff outlook on the CRM were generally positive, their descriptions of the CRM implementation process implied a certain level of fatigue. Therefore, it should not be assumed that an organization that successfully implements one system could immediately do so again.

The perception about the amount of time required to implement and maintain a KM system is another factor that figured prominently in this study. Participants were consistent in their reference to time requirements as a substantial potential barrier. This factor relates to the perceived potential value and benefits that may result from the time and effort invested, as mentioned earlier. Making the effort to understand staff perceptions about the time-intensiveness of a KM initiative would be an important part of assessing an organization's readiness.

Another factor that emerged in this study was the rate of change of information or knowledge and how this can impact behaviours and practices in an organization. The IRD and the global student mobility sector are tied to the ever-changing realities of external factors such as the economies and policies of Canada and other countries and to the thousands of other competing universities worldwide. Internally, the IRD must regularly respond to changes within the university. IRD participants commented on the high turnover of information and what is considered up to date, which has created uncertainty

about the accuracy or correctness of stored knowledge and information. This leads to staff members working around their knowledge repositories and instead relying on conversations with colleagues. Therefore, it is worth considering whether the rate of change of information and knowledge has an impact on these behaviours. This may also be a consideration for KM system designs and how well they are able to capture rapidly changing knowledge and information.

### **Limitations**

There are at least six ways in which this study has limitations. First, given the nature of case studies, this project is based on a single organization which affects the extent to which the outcomes may be relevant to other organizational settings. Second, the researcher chose to study four KM tools in an organizational context, in addition to researching KM implementation in organizations in general, which may have been too much to take on for this type of project. If done again, the researcher would have limited the number of tools researched from four down to one or two in an attempt to study their implementation in greater detail.

Third, there are advantages and disadvantages of choosing a cross-sectional approach to a study such as this where the topic is practical in nature. A disadvantage is that it does not allow for a real-life account of the participants' experiences and the issues and outcomes of a process, such as implementing a KM initiative. By contrast, the method used in this study was more hypothetical in nature as participants were not required to experience an implementation. Rather, they spoke to what they imagined an implementation would be like. However, this is relevant to the mindset of staff

considering a concept prior to its implementation. In this way, it is hoped that the format offers some authenticity to what an organization would go through at such a stage.

Fourth, it was noted in this paper that the focus group participants, and the researcher, were in the midst of a Customer Relationship Management (CRM) implementation at the IRD. The experiences of those involved directly with the CRM implementation may have factored into their responses to questions and discussions in this study.

Fifth, there were some methodological elements of this study that, if repeated, the researcher might have done differently. Some of the survey questions turned out to be overly restrictive and perhaps did not allow participants to more fully consider their perceptions of how knowledge is managed in their organization. It might have been beneficial to make these questions more general.

Finally, while this study was designed for establishing consensus on KM topics within the IRD and was effective for exploring these topics, it does not account for the complexity of the IRD's organizational design and operations and its implications on KM. A way to address this could be to add interviews or additional focus groups accounting for complexity were of interest.

### **Further Research**

This study has practical implications for the case organization, and for further research. One of the most prominent elements of this study, in the researcher's opinion, was the use of the process view of knowledge management (KM) and Alavi and Leidner's (2001) framework for KM as a lens for exploring KM processes in an organizational setting. These processes were facilitated by using Massingham's (2014)

*knowledge preservation* toolkit for discussion purposes. This framework, which focuses on understanding the components of KM, could be used as a model to explore other organizations in a similar manner.

A key factor that emerged in this study was participant concerns about the perception that implementing KM practices would be burdensome in terms of their time. Further studies could be done on how to overcome this barrier, particularly looking at the relationship between perceived time requirements of staff versus the potential direct benefits to staff that may result from their efforts to support a KM initiative.

Another area requiring additional study is the timing of a KM implementation. Understanding the factors that relate to timing, such as other organizational events, efforts or initiatives, as well as the extent to which an organization provides lead time for a KM initiative could be further examined.

Using the single focus group approach to this study, the researcher learned that organizational complexity is a factor that should be considered when selecting methods for a study on the topic of KM. Depending on the makeup of an organization, the extent of specialization, whether teams are integrated and rely on collective knowledge or not, may impact the fit of particular research methods.

This study raises other factors outlined in the discussion section that may be explored further, all of which could be considerations for determining organizational readiness for a KM system implementation. The pre-implementation phase of a KM initiative is an area that requires further study and could help inform the way organizations plan for an effective implementation. For practitioners, it is hoped that the findings of this research provide insight into factors that may come up in other settings

and provides a framework for them to explore the state of KM behaviors and perceptions in their organization and help them to make decisions and considerations that make for a more effective preparation for a KM system implementation.

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**Appendix A – Massingham Knowledge Preservation Tool Descriptions**

Quoted from:

Massingham, P. (2014). An evaluation of knowledge management tools: Part 2—managing knowledge flows and enablers. *Journal of Knowledge Management*, 18(6), 1101-1126.

***Select Process***

“The select process aimed to identify what knowledge to preserve, and also to ensure it is captured and regularly updated. In this way, it has a continual improvement aspect by maintaining a relevant and up-to-date stock of organisational memory (Probst *et al.*, 2002). Capturing organisational memory will ensure the organisation preserves valuable knowledge, and that the learning from this activity (i.e. the process of selecting storing and updating organisational memory), is embedded into respondents’ work, creating a sense of continuous learning, which is validated by the organization. This tool identifies what knowledge to capture” (Massingham, 2014, p. 1106).

***Storage Process***

“Grounded in theories about content management (Srikantaiah, 2007), the tool helped participants understand how to best ‘warehouse’ this knowledge so it is accessible and therefore used by others. This tool identifies how to store the knowledge captured” (p. 1106).

***Metadata Process***

“This tool provides participants with the context and meaning of the data represented by the knowledge repository (e.g. computer file), so it can be accurately used by the enterprise (Inmon *et al.*, 2007). It is “data about data.” It is a system that draws in



data and information from a range of sources – called a metadata repository or meta-system or business intelligence system. This tool identifies how to make the knowledge stored accessible” (p. 1106).

***Lessons Learned Database***

“This tool is widely used in best practice learning organisations around the world. It is grounded in learning theory and builds upon the principle of sharing experience so that mistakes and duplication are avoided. It is a subset of organisational memory – stored information from the past that can be drawn upon and brought to bear on present decisions and/or actions. It includes both the process of capturing lessons learned and the design of the database... This tool specifically preserves experience” (p. 1107).

**Appendix B – Invitation Letter**

**UNIVERSITY OF ALBERTA**  
MA COMMUNICATIONS  
AND TECHNOLOGY

**(Date)**

Dear **(Name of Prospective Participant)**,

I am writing to you as a current student at the University of Alberta's MA Communications and Technology program. I would like to invite you to participate in a focus group on **(insert finalized date, time and location)** about how knowledge is currently managed in [IRD] and to study the potential value of knowledge management in organizational settings like yours. The focus group will last for approximately one and a half hours. The outcomes of the focus group will be used as research that will contribute to my final capping project.

The focus group will provide an opportunity to gain your perspective about the way knowledge is managed at [IRD]. In particular I would like to find out if we can:

- improve the way know-how, experience and knowledge is transferred between staff and retained in the department;
- find out if there are particular tools or methods that can be used to improve the transfer and retention of knowledge at [IRD].

More background information will be sent to those confirming attendance before the focus group.

Your views will be used to help determine if certain tools or methods could be used to improve the management of knowledge at [IRD]. If you would like to take part in the focus group on **(insert date)** please contact me at 1-778-871-7274 or email [bavin@ualberta.ca](mailto:bavin@ualberta.ca).

Best regards,

Marc Bavin

## Appendix C – Information Letter and Consent Form



### INFORMATION LETTER and CONSENT FORM

**Principal Investigator:**

Marc Bavin, MACT Student  
Faculty of Extension  
University of Alberta  
778-871-7274  
bavin@ualberta.ca

**Supervisor:**

Dr. Stanley Varnhagen, Professor  
Faculty of Extension  
University of Alberta  
780-492-3641  
stanley.varnhagen@ualberta.ca

**Study: Examining the Use of Knowledge Management in a University Department****Background & Purpose**

You are being asked to participate in a study to find out how knowledge is currently managed in your organization and to study the potential value of creating a model for managing the knowledge held by individuals in organizational settings like yours. The reason this study is being conducted is find out if there are tools that can be used to improve the creation, storage, retrieval, transfer and application of knowledge. The goal of this study is to gain your perspective about how knowledge is managed in your organization with the hope that the information collected could help to improve the way know-how, experience and knowledge is transferred between staff and retained within departments similar to yours. Findings from this study will be used to write the final project for my master's degree and both findings and direct quotations from participants may appear in public presentations, publications and used for teaching purposes.

**Study Procedures**

I am asking for your participation in a focus group among an anticipated total of approximately six to eight participants. Your selection is based on the organization you work for, and your location (city) of employment. The focus group will last for up to 90 minutes and will include an initial survey that will take up the first 10 minutes. For participants attending the focus group in person, the survey will be paper-based and submitted before the focus group begins. For participants attending the focus group by distance, the survey will be forwarded by email in a Microsoft Word file that you will complete, save and send back to the Principal Investigator via email. The focus group will be audio recorded for later transcription and analysis. Those who choose to participate in this study will not be mentioned to others for your confidentiality and anonymity.

**Benefits**

It is possible that you will not obtain any direct benefits from participating in this study. However, you may benefit from participating in this study by gaining awareness or learning about the field of knowledge management and techniques used to improve transfer of knowledge on a day-to-day basis in your organization. There will be no costs nor any compensation based on your participation. My hope is that the information gained from this study will help improve the way knowledge is shared and preserved in your organization and others.



### Risks

The nature of the topic in the survey and focus group is not expected to be controversial, however, if risks to this study become known, participants will be contacted. There is a collective participant-researcher responsibility to maintain confidentiality and anonymity and to not share content from the focus group to others. Adherence to this responsibility cannot be guaranteed and, therefore, confidentiality and anonymity cannot be guaranteed.

### Voluntary Participation

Your participation in this study is strictly voluntary and you are under no obligation to participate. It is anticipated that only some of those invited to participate will choose to do so. Therefore, please do not feel pressured into participation. This study is extracurricular to your work so your non-participation will have no negative consequences. If you choose to participate in this study and change your mind at some point during the focus group, you are free not to answer questions or leave at any time. However, any data that is collected cannot be withdrawn with the exception of any submitted survey data. Participants are asked to indicate their request for the withdrawal of their survey data no later than the end of the focus group session.

### Confidentiality & Anonymity

The intended use of the data collected from this study will be for the completion of the capping project for my master's degree. Any identifiable data that is collected will be anonymized so that your identity is protected in the final publication. The final publication will be made available to your employer and may be publicly accessible. However, your employer will not have access to any of the raw data and will only see anonymized quotes from the research. As mentioned above, those who choose to participate in this study will not be mentioned to others.

To ensure confidentiality, all data will be accessible only to the researchers named above, and will be kept in password-protected files on an encrypted computer or in a locked file cabinet. This data will be kept for a period of five years, as mandated by the University of Alberta, after which it will be destroyed.

If you have any questions or concerns or would like more information about the study, please contact Marc Bavin at 778-871-7274. The plan for this study has been reviewed for its adherence to ethical guidelines by a Research Ethics Board at the University of Alberta and [the case university]. For questions regarding participant rights and ethical conduct of research, contact the University of Alberta's Research Ethics Office at (780) 492-2615.

### Consent Statement

I have read this form and the research study has been explained to me. I have been given the opportunity to ask questions and my questions have been answered. If I have additional questions, I have been told whom to contact. I agree to participate in the research study described above and will receive a copy of this consent form.

---

Participant's Name (printed) and Signature

---

Date

## Appendix D – Focus Group Script

Survey/Focus Group Script

Researcher: Marc Bavin

### 1. Initial Comments (5 mins)

- Thank you to everyone for taking time to consider participating in today's survey and focus group.
- Before we begin, please review the information letter and consent form and sign it (for those physically present; meanwhile, will have already sought signatures from remote participants in advance of the survey/focus group); a reminder that you are under no obligation to participate and you may withdraw at any time. Note that if you withdraw during the focus group portion, I would not be able to withdraw the data as your responses would be mixed with those of others and may be difficult to identify.
- For confidentiality and anonymity purposes it is important that all participants agree not to disclose who participated, or the contents of our discussion, to others outside of this group. Note that any identifiable, raw data will be anonymized so that your identity is protected.
- We will begin with a 10-minute survey, followed by a focus group discussion of up to 70 minutes.

### 2. Collect consent forms (2 mins/7 mins total)

### 3. Ask group to complete surveys (10 mins/17 mins total)

### 4. Introduce Focus Group (3 mins/20 mins total)

- This study aims to focus on the potential value of KM in organizations like [IRD].
- My goal today is to gain your perspectives about how the know-how, experience and knowledge at [IRD] is created, stored, retrieved, transferred and applied by individual staff members.
- I will introduce some examples of knowledge management tools used in other research and ask for your feedback about these tools and how they might apply at [IRD].
- Finally, you were invited to participate because each of you represent a unique perspective – there are no right or wrong answers.

### 5. Questions:

Will break the questions into three subsets: 1) introductory, 2) KM toolkit questions, 3) summary questions:

**Introductory Questions (15 mins/35 mins total):**

- 1) What tools or methods at [IRD] could be or are used for KM?
- 2) Do you think know-how, experience and knowledge of [IRD] staff is accessible to other [IRD] staff members? Why or why not?
- 3) How might KM be useful to [IRD] and why? (Probe: geographic disparity)

**KM Toolkit Questions (40 mins/75 mins total):**

“Select process” KM tool description: identifies what knowledge to preserve and then capture and regularly update it (i.e. In a continual improvement manner). Goal is to maintain a relevant, current organizational memory. It is argued that those involved in the process of capturing organizational memory a) help preserve valuable knowledge for the organization, b) embed this knowledge into their own work and c) learn continuously. This tool identifies what knowledge to capture.

- 4) What potential value do you see in capturing knowledge?
- 5) What obstacles could arise when trying to implement this tool?

“Storage process” KM tool description: is focused on ensuring participants understand how best to “warehouse” knowledge so that it is accessible and actively used by others. This tool deals with the storage of captured knowledge.

- 6) What potential value do you see in storing know-how, experience and knowledge for access and active use by others?
- 7) What obstacles could arise when trying to implement this tool?

“Metadata process” KM tool description: provides context and meaning of the data represented by a knowledge repository (data about data). This tool identifies how to make the knowledge stored accessible.

- 8) What potential value do you see in making stored knowledge more accessible?
- 9) What obstacles could arise when trying to implement this tool?

“Lessons-learned database” KM tool description: based on the principle of sharing experience so that mistakes and duplication are avoided. A subset of organizational memory – stored information from past specific experiences used to inform present decisions/actions. This tool includes both the process of capturing lessons learned and the design of the database. The tool is intended to preserve experience.

- 10) What potential value do you see in a lessons-learned database?
- 11) What obstacles could arise when trying to implement this tool?

**Summary questions (15 mins/90 mins total):**

- 12) Overall, how might the types of knowledge outlined in the four KM tools described be useful, and how? In this regard, which KM tool would be most valuable? The least valuable?
- 13) Overall, what would you see as the most likely implementation barriers for these KM tools? Which tool do you think would be the easiest to implement? The most difficult?
- 14) Is there anything else you would like to mention?

## Probes:

- Note: Where a customer relationship management (CRM) system is about managing [IRD's] operations and relationships with key external stakeholders (students, parents, counsellors, etc.) knowledge management has more to do with creating, storing and transferring the know-how, experience and knowledge possessed by [IRD] staff.
- Question: Can you think of some forms of KM that would not be IT-based? I.e. storytelling, training, meetings, etc.

**Appendix E – Survey**

**UNIVERSITY OF ALBERTA**  
 MA COMMUNICATIONS  
 AND TECHNOLOGY

**Initial Survey for Focus Group**

Researcher: Marc Bavin

**Participant #1**

Office Location:	<input type="checkbox"/> Larger Campus	<input type="checkbox"/> Smaller Campus	<input type="checkbox"/> Off-Campus	
# of years with [IRD]:	<input type="checkbox"/> 1 – 5 years	<input type="checkbox"/> 6 – 10 years	<input type="checkbox"/> 11 – 15 years	<input type="checkbox"/> 16+ years

## Questions:

1. What does the term “knowledge management” mean to you?
2. What would you say is one example of how individual or departmental know-how, experience or knowledge at [IRD] is captured and made accessible to staff members?
3. On a scale of 1 to 5, to what extent are you aware of the knowledge (the know-how, experience) that exists across all staff at [IRD]? (1 = not aware; 5 = completely aware)
4. On a scale of 1 to 5, to what extent do you think you have access to the knowledge that exists at [IRD]? (1 = no access; 5 = full access)
5. On a scale of 1 to 5, to what extent do you know where to obtain knowledge at [IRD]? (1 = don’t know where; 5 = know exactly where)
6. On a scale of 1 to 5, how important do you think it is on a day-to-day basis for someone in your role at [IRD] to be aware of and have access to the know-how, experience and knowledge possessed by your departmental colleagues? (1 = not important; 5 = very important)
7. On a scale of 1 to 5, how much thought have you put into issues related to knowledge management? (1 = no thought; 5 = lots of thought)



**Appendix F – Survey Results Tabulated**

Question	Participant 1	Participant 2	Participant 3	Participant 4	Participant 5	Participant 6	Avg	Max	Min
Office Location (Larger campus, smaller campus or off-campus)	Larger campus	Larger campus	Smaller campus	Off-campus	Larger campus	Larger campus			
# of years working at case organization (IRD)	6-10 years	1-5 years	1-5 years	1-5 years	6-10 years	6-10 years			
Question 1: What does the term "knowledge management" mean to you?	How information is shared within a space/department.	How information/knowledge is shared within a group (to ensure everyone has access to the info they need/should have access to).	Efficient and useful ways of gathering, sharing and storing information in a way that is beneficial.	Processes by which information and skills related to the work of an organization is stored and shared with members.	Most effective way of preserving and parking our information.	Knowing who is an expert on certain topics. Storing and organizing information that the team uses. Knowing where to find information vital to do my job and for others to do theirs.			
Question 2: What would you say is one example of how individual or departmental know-how, experience or knowledge at the IRD is captured and made accessible to staff members?	The wiki, team meetings, shared drive	shared drive	The wiki is a resource that has a lot of information from previous years.	For the most part, this is only done through general e-mails sent to all team members. There are also pages on the wiki, but they aren't regularly updated or well organized.	CRM, trip reports, wiki	Use of wiki and shared drive for training documents.			
Question 3: On a scale of 1 to 5, to what extent are you aware of the knowledge (the know-how, experience) that exists across all staff at the IRD? (1 = not aware; 5 = completely aware)	3.5	4	4	3	2	3.5	3.33	4	2
Question 4: On a scale of 1 to 5, to what extent do you think you have access to the knowledge that exists at the IRD? (1 = no access; 5 = full access)	4	3	3	3	3	4	3.33	4	3
Question 5: On a scale of 1 to 5, to what extent do you know where to obtain knowledge at the IRD? (1 = don't know where; 5 = know exactly where)	3	3	4	3	4	4	3.5	4	3
Question 6: On a scale of 1 to 5, how important do you think it is on a day-to-day basis for someone in your role at the IRD to be aware of and have access to the know-how, experience and knowledge possessed by your departmental colleagues? (1 = not important; 5 = very important)	5	5	5	5	3	4	4.5	5	3
Question 7: On a scale of 1 to 5, how much thought have you put into issues related to knowledge management? (1 = no thought; 5 = lots of thought)	3	3	3	2	3	4	3	4	2

**Appendix G – Focus Group Transcript**

Marc Bavin

Recorded: March 19, 2018

PI = Principal Investigator

For anonymity purposes, participants are not tracked in this document.

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<Intro Question 1>

PI: The first question would be what tool or methods, and this is kind of repeats one of the ones you would have seen, but as a discussion point, what tools or methods at [your department] could be or are used for knowledge management?

So something that we currently already use?

PI: Yeah, or feel that maybe is not used and could be used to sort of manage knowledge... and don't worry I'll help to clarify if...

I mean I like the drive as one place where a lot of information is saved

Yeah, same with the wiki, you know, lots of information stored there. Meetings, obviously, as a shared knowledge space.

And just, like, talking to people – like “hey, somebody said that you know how to do this”

Yes, like “help!” [*laughs*]

Yeah, I don't know if that's like a shared resource?

PI: Definitely. There are technological and non-technological... there are also forms of knowledge that are implicit versus explicit... so, there are things that you just know and there are things that are very difficult to explain, and then there are those that are very easily... very technical, etc. So yeah I guess, on that, is there... in thinking of those moments where maybe you don't quite know the answer to something and you know somebody probably does, how to then create the situation for that to happen? Have you thought: it would be really great if, for example, somebody who is a real expert in the Chinese curriculum... but you don't really know to what extent, especially if you are a new person, etc. So, thinking about that, is there anything that you think that would potentially facilitate that that isn't currently or already... or maybe is done a little bit but not enough?

We have talks on this side once in a while with [one of our colleagues] about having something where it has everyone's picture and like a... you click on it and it would tell you what each person's expertise is or like the areas to ask them about. Like, this person really knows China and these specific things. We kind of chatted that that would be a cool thing to have just because our team is so big now, and so when you're starting out it's hard to kind figure out who has what knowledge.

PI: And, [remote participants], do you find that, obviously, when you're not... for example, especially on the [larger] campus where a lot of movement can happen in terms of even just [logistics staff] or other staff members... you feel like okay I know a core group of who is over there and what they do and what their expertise is, but...

Yeah, and I find I usually go to my team on [my campus] first and luckily there are lots of experts there – they'll tell me sort of who to reach out to. And now I generally know but definitely, for example, the student workers and whatnot and co-op students, they switch so quickly we don't necessarily know them by face so unless they sort of show their face in the meetings, you kind of know this name but you don't really know who they are.

PI: And perhaps with teams who you don't interface... like your recruiter colleagues, probably you know who knows what, but maybe in awards or in on-campus or in other areas you might not know that somebody has a goldmine of particular knowledge maybe?

Yeah, I agree, I think when I just spent a couple weeks on campus earlier this year I actually got to know a few people better and now they are sort of added to my roster of people I will definitely ask questions to. Because before that I was like, I mean, I know this person is nice, but I don't know how nice. Like if I just bug them randomly like "hey, do you know this really obvious answer?" How willing will they be to help me out? But I think, being away, there is a little bit of that where knowing exactly who is around what their expertise it would make it a lot easier to just focus and laser in on a question rather than tiptoe around it so I don't come up as an idiot.

It's even one of those things, in terms of levels. Like I typically start asking questions to the recruiters before I necessarily bug the managers or like, you know, I typically go to [Region 1, manager 1] or [Region 1, manager 2] before I go to [the director] about something, you know what I mean? So you kind of work within your hierarchy or structure as well.

<Intro Question 2>

PI: This is a little bit related, or an expansion on this, but do you think know-how, experience and knowledge of [department] staff is accessible to other staff members? Why or why not? So, similar in terms of the idea of access, you know, thinking of the [Executive Director] or other people who have decades of expertise and knowledge and know-how... how to tap into that? How to access it? Thinking of that extreme end, how would you foresee gaining access?

I think in-person access is definitely always there, like I've never felt I couldn't email [the Senior Director] or [the Executive Director] if I needed to say I'd like to have a conversation about this, like I would never feel that that opportunity wasn't there. But there isn't like a written or... let's say that I wanted to see what the on-campus or awards team is doing in terms of a written... or somewhere online or on the v-drive – that is a bit more limited because I wouldn't know what to look for, where to go, where to start, like I feel that's not there, but I feel like as a team, [we are] very approachable – I'd be open to talk to anybody about anything. So that access I would say is definitely there. But in terms of, but in terms of if someone left, I don't know if I would be able to figure out what they knew. So is that anywhere? I feel like that may be lacking a little bit. But access otherwise, like someone who is still here, I don't feel like I have limited access to them.

PI: That's a good separation between the non-technical versus IT-based... and then thinking of the categories of knowledge as well. So there's, again, process type knowledge, there's relationship knowledge, there's political knowledge, there are all of those various kinds. There may be certain segments that are accessible and then others where that's some of the value when you lose somebody that that goes, typically, with those people...

I think it also might be where you're based as well... you know...

Yes... that's true

You know, being in [the larger campus] I feel like, yeah, I can drop by [the Senior Director's] office, or I can drop by [the Director's] office, but it's always been like that... I've always felt like that. But I remember many years ago, there was a new member of the team in the [smaller campus] who kept asking me all these questions and I just said, well, why don't you just ask [the Director] directly, like, he's not going to bite [*laughs*]! Right? And so I don't know if that was like not knowing if it wasn't clear when they started what the hierarchy was or how do you approach this person because I think those are kind of like visual clues that you get or you get a sense of it from being in the same place but when you're remote you really don't know... you can't pick up on those subtleties.

Yeah I would agree with that, that you don't have the day-to-day relationship with people so it's hard to know... of course you know them and they're friendly, you know that they'll answer you, but you don't know sort of the way the office operates because you're not there day-to-day so you don't know if just dropping into [the Director's] office would be appropriate, or if [the Director] likes to have a formal email which would normally come from this campus, I don't really have a way to gauge until you start having those meet-ups twice a year and kind of get to know people better.

<Intro Question 3>

PI: Interesting. And just to summarize all of this, how might knowledge management be useful to [the department] and why? I think we're talking a little bit about this but any further thoughts on that? You've come up with some interesting ideas already...

Well I think the biggest thing is the fact that we are such a large team with really varied jobs and backgrounds and expertise that, you know, and then we do get new people coming in, or replacements so everybody is bringing in new knowledge. So having a system or a plan in place in terms of how that is shared is a helpful thing. I know when a few of the newer members have started, you sort of have a person and that becomes who you go to for, just like what [other participant] was saying, for all of your questions and then once people get settled in and start to learn the systems a little bit better then they kind of spread out... but I think that's kind of how it starts, whereas if that process could be sped up somehow by having a better knowledge management system, then that would be kind of cool.

Well, and maybe a single, not a *single* medium, but we have so many different mediums to deal with... the wiki, the v-drive, the this, the that, the [new] CRM, the [old CRM] and even Skype, right? Like some people, you just go by their desk and say hey I have a question. Other people are like, you know, even though you're two feet away from me, contact me by Skype. Sometimes just to get to the knowledge you have to know how that person prefers to be contacted.

Yeah and where that stuff is stored because I know there are times where I'll have a question and it seems like something I should know already, and then I'll be like I swear that was in a meeting and I'll look through the meeting notes and it's not there and then I'm like maybe it was on the wiki and then I'll ask [a colleague] or something and she's like, oh no it came in an email from this person so it's like sorting out the source of that... I know the information came but I don't exactly know how to find it again.

Well and it's one of those things too, like, I mean, I'm a believer... maybe because sometimes I'm a little bit lazy, but I just prefer to ask somebody. Like [other participant] knows, anytime I have a student ambassador type question, who should come to the [US] Northwest [applicant events]? I don't want to have to... I could go on the tours website and click through everybody and read them all, or I could stop by [other participant's] desk and say who are some of the people that we have from this area and who would you recommend?

PI: Yeah so weighing time and proximity, perhaps?

Also, one thing that I've thought about a lot in the last little while, because I'm like oh that person should... they're asking me this question when it was in the recruiter meeting. Well that person might have been away for the recruiter meeting, or you know, whatever meeting. And, it's great that we take notes and we put them on the wiki but if you think about it, if you're gone for two weeks or two and a half weeks you may have missed like five different meetings and to go and remember to read all of the notes for all the... you may have missed two recruiter meetings, three team meetings a staff meeting... are you

really going to go and read all those notes? And maybe an admissions meeting. And, you know, the idea is yes you should when you get back from your trip you should read these but we have a million other things to do... so to do that is... or even just reading your back email [*laughs*] is sometimes difficult.

Yeah not only that too, like, if you do sit there and just go through and read all... like what sticks in your head? You know what I mean? Like, certain information stays. I might remember US curriculum changes a lot more because that's what affects me but then I have a student who did grade 10 in China so I know there's something about that but instead of going through and sorting through all the old meetings it's easier to ask [our China specialist] or somebody on the [Asia-Europe Team]. So, in terms of knowledge management we have some great technology tools, and new ones are coming and they're gonna be great [*laughter*], but currently it's not searchable. People will be like, oh it was in the admissions meeting and you'll be like, which one? And so you can't go through and if you're scrolling through six months of admissions meetings to try and find information, that's not very useful.

On top of that I would say that the information changes relatively quickly so even if you found what you were thinking of in that admissions meeting... I don't go to any team meetings so if that was updated in [a Region 1] or [Region 2] meeting I wouldn't necessarily have gotten the new information about that specific thing unless I searched many different places. So I would assume what I found was up to date but I wouldn't really be sure unless I talked to somebody.

I was going to add to that, that when it's not necessarily a standardly scheduled meeting sometimes these notes either don't show up or they take a really long time. Like I know at the last retreat in December, we were always told at all the sessions like yeah don't worry I'll take notes and we're going to put this up on the wiki or, like, everything we talk about here will be compiled and put up on the wiki. And then at one point I just stopped looking for it because it was never there. Or even when I look at new [representative] training page on the wiki, there's one page and I open it and it's blank. Or it's like a schedule or a timetable of what was supposed to be done but then there's no notes. Or things like that like where when it's not a standard meeting where someone's assigned to take notes stuff kind of tends to evaporate.

<18:55>

<KM Toolkit Question 4>

PI: Those are good... I think that helps illustrate a number of the issues because it's really around a combination of time, location, disparity of backgrounds, experience, work types, etc. I'm going to start us into the actual... again there are four different toolkits... or, sorry... one toolkit. So this particular researcher developed four toolkits, did a five-year longitudinal study and within each toolkit there are four or five tools. So each toolkit was designed for a particular purpose. So this toolkit was designed around knowledge preservation in an organizational setting. Within that there are four tools, which we will

go through one by one and sort of talk about, in a theoretical world, what would that look like potentially. So to start off, the first one is called “select process” so I’m going to read you... this is sort of a coles notes of what the actual description of the toolkit is but I’ll read from the report itself. So it says, the select process aims to identify what knowledge to preserve and to also ensure it is captured and regularly updated and this way it has a continual improvement aspect by maintaining a relevant and up to date stock of organizational information. It is intended that this really is to help foster the preservation of valuable knowledge and that the learning from this activity is embedded into the respondents work, creating a sense of continuous learning which is validated by the organization. So this tool is really about identifying what knowledge to capture in the first place. So it’s a little bit abstract, but I guess in trying to think about trying to identify what knowledge to capture and then maybe the how is afterwards but, any thoughts about this? In here it’s not really spelled out, they probably did a number of tasks or exercises but really getting individual staff members to sort of be responsible for an area of knowledge capture.

So I think the interesting thing about this is sometimes I for, like when I’m writing, for example, notes or I’m putting things together, I don’t realize sometimes what other people might need from that. So for example I bring notes for a professor at the end of an [applicant event] and [the director] goes and comes back and is like what about this, this, this and this? And I’m like, oh, interesting, like I didn’t think you would need to know that so I think sometimes what’s relevant needs to be a bigger discussion in the sense of, you know, this is the kind of information we think we need to know for this reason, and kind of almost having something like templates for example, like when I put together my reports sometimes I just write what I think I got out of it but sometimes I don’t know if it’s what actually... the people who are going to be looking at it in the future might need. So that’s an example of what we had in our team meeting we talked about, okay these are the things... please watch every professor at each [applicant event], and please take down XYZ so now all of our notes on professors is a little bit more standardized. And let’s say next year they come back and they want to know should they bring the professor back? They’ll have the right information to be able to do that for the following year. It’s something on the top of my mind because it just happened like yesterday. But that’s an example of where I think relevant knowledge is something that needs to be a bigger discussion just because what I think is relevant may not be exactly what someone else is looking for at a different level I guess. It’s something that has been interesting for me to realize when I’m putting something together for the team.

You also need to remember what you already have as innate knowledge in your head, right?

Correct. Yeah.

Like you know that, obviously, the event is going to be at these timeframes and we’re expecting this many students, right? I think about it in terms of a trip report. Like, so if I’m not doing this next year, what do people need to know, you know? Like was it a good visit, was it a bad visit, roughly how many students, because that correlates to how much

materials to bring and all those types of things. And is it worthwhile to go back? So I think sometimes we get caught up in some of the more finite details and forget about like just general knowledge that, you know, everybody needs to have.

PI: Anybody else? Yeah, I mean, I think it's... I mean just talking a bit off topic but I think it's... my observation is that it's been, at [the department], it's been a practice here. But yeah that is a good delineation between, you know, capturing for capturing sake versus trying to sort of identify what to capture. And that it is ongoing. Because to your earlier point, [participant], what the admissions update on the US curriculum was six months ago might be irrelevant today.

I mean, I love when a new person gets hired. You know, like... I mean don't any of you people go anywhere, but you know what I mean... when you bring on somebody new and they go through the training and then you're talking with somebody and they're like oh, but so and so just said, like I just had a meeting with admissions and they just said this and you're like... what? Really? Oh, that's interesting [*laughs*]. You know, because I haven't had training in six years. You know, sometimes newer people because they're learning it all for the first time kind of again breaks down... that's what's relevant. That's what somebody who doesn't know stuff needs to know in order to go out on this first trip or take care of this first event or put together this thing on [the old CRM] or whatever it might be.

<KM Toolkit Question 6>

PI: And that brings up another issue of knowledge within the organizational unit and then the intra-relationships with other [university] units be it admissions or student services or other faculties, etc. Alright, we'll tackle the second one, so... kind of an obvious next step is storage process, so... storage process is focused on ensuring participants understand how best to warehouse knowledge so that it is accessible and actively used by others. This tool deals with storage of captured knowledge. So the previous tool being the act of doing the capturing, and now it's, okay, where is it? And how to access? So we kind of covered a little bit of this before about, you know, where... I mean, the multiple locations. But maybe thinking about this towards possible solutions, even using maybe something, as an example, like trip reports. Is there a way that any of you have thought about... you know, maybe it would be better if it was like this? Or in terms of just accessing. Any thoughts about how or where? Curious about the offsite locations as well where you don't have the ease of just walking down to the next cubicle.

I think what would make things a lot easier would be if there were some system, and again I don't know how easy this is because I'm not a tech person but, for tagging information. Let's say you are searching the wiki and then you just search US curriculum and then you get hits from the admissions meeting, from the [Region 1] meeting, the whatever meeting, because sometimes when I'm googling, I'll find like an excerpt from team... like notes from some meeting. So if we could have a way to tag stuff in our own things, which would then add that extra task to whoever is taking the notes to tag every



relevant bit of information, but yeah, I think that would make life a lot easier... not having to search each individual list.

PI: You're miles ahead, that's actually one of the next... but that's a good thought

I think along the same lines, and we sort of do this but, like, a standard vocabulary, right? Because sometimes you search US curriculum, sometimes you search USA and different things, you know, something pops up for one, something pops up for the other and so like always, you know if things were slightly more standardized, or you know and I might be one of the worst on the [Region 1] Team in terms of I do all my planning on my own laptop and then I throw it into the v-drive at the end and [the director] yells at me and that's okay. But you know what I mean? And so when somebody is looking for reports it's oh, [colleague] where is, you know... you've done that but I haven't put it up on the v-drive or I haven't done that and you know at [the Region 1 team] we store things by location versus maybe like chronological order or you know, like every team does something a little bit differently and so having a better standardization so that if I went into [Region 2 team's] files to look for something it would be easier to find.

PI: What's your experience, just thinking of the storage process, like if ever you need to go and find something from [a team in the department apart from the Region 1 or Region 2 teams] or...

I go upstairs and ask [a colleague]

Exactly, oh 100%! I wouldn't even try. Honestly, I wouldn't even try. It would be a waste of my time.

I think the v-drive, I mean, the v-drive is great because it's a historical archive of everything we've done since 1999 or something, but there needs to be archiving of it. You know? It's a mess. And, you know, I'm sure there are some things we just never use anymore or this was a file or a folder that got created by accident and it's never used and, like, when you're looking for something you might go in there and you're like oh, this is where I'm going to find something and then the last thing that was in there was from 2008 or something.

I think the other thing too, and this is something that came up in the retreat last June, and I think [other participant] and [another colleague] hosted like a little bit of a knowledge management slide... a little bit on that point. But [a teammate] and I, for example, and this is where talking back to the other one where we're trying to update it, we've been trying to put together, for example, like a wiki page by city, actually. And I think we mention that before, and it's something we've been wanting to do but we've just not had... it requires a lot of time to set it up and put it together. But it's about... instead of having to go through ten different trip reports to see all the information that they would... also each trip for us is joined with a different. How do I explain it? It's like Shanghai is never just Shanghai. It's like Shanghai with Brunei or Shanghai with Mumbai or Shanghai with something else and so it's very difficult to find sometimes where that

information might be in a different year because a different person has also done it. The trip title might be different. So sometimes it's one city out of like... you know, [Region 2, Manager 1 has] done like ten different countries in one trip and I can't seem to find where Vientiane is in that long title. So things like that get quite difficult, but it would be good if I'm on the wiki and I could just say, warehouse some information, I could see for the last five years, what are all the hotels they stayed at, you know, what's the currency I need, how do I get a SIM card, what's the transportation like? You know, all this information all in one page and then it's about, you know, when that person comes back from that trip, they would have to update that and then we keep it at a five-year length, so when you update it you can delete the person's from like six years ago... like, keep it five. But that kind of stuff requires work and the issue is that at times like this when we're over... we're kind of overworked, it doesn't happen.

<33:03>

And then on your down times, it's been so long since, you know, sometimes you forget to go back and do the work that you should have done in the busy season.

Yeah, I totally agree with that especially on my side because I'm the only [team representative] on this side so I should be putting stuff directly into the v-drive but it's easier to work every day off of my computer and then to get around to putting it in the right spot doesn't always happen when it should, so it's my fault but it's also like a system... it moves so quickly through the term that having the time to go back and actually use the system that's there is something I have to make a real point of doing.

<KM Toolkit Question 7>

PI: I just realized I had a and b questions on each of these and we've sort of talked through, sort of, what the potential value would be, but on the flip side you also touched on... and that's what just triggered me... is that, what obstacles could arise when trying to implement a tool like this? So time is something that has been mentioned... anything else?

Repetition for me. Like, I feel like I'm doing the same thing. I've written this but I'm putting it in the wiki, I'm putting it in my trip report and I'm putting it on [the old CRM]. We've already established that's going to change when the new CRM comes, I think? Right? So, I know that there are solutions in place and I'm doing it for now, knowing that I don't have to do that in like a year.

I think part of the obstacles too is, you know, everybody's brain works differently in that, you know, [other participant] thinks it's really important how to get a SIM card. I have KnowRoaming, I never look for a SIM card. And so if I was doing his Shanghai trip, I wouldn't put down that information, right? So having something standardized would help in terms of like a checkmark type of system.

Yeah, fair enough. And you realize that KnowRoaming doesn't work in Cambodia [laughs].

Sure, yeah. Turns out South Africa's an issue too! But yeah, so I think in terms of back to figuring out what an individual deems as important versus having a discussion as a larger team to coming up with, these are the top twenty things or ten things that we need to know, right, and having that standardization done.

<KM Toolkit Question 5>

PI: I think we sort of covered... I actually just want to quickly dip back to the first one just in case there was anything. Again, probably similar outcomes to this question of barriers around the whole process of selecting knowledge to capture, so I heard time... and probably, similarly, sort of repetition [two participants nod in agreement]... anything else that you can think of?

I think again what [other participant] said... just that people kind of need different information.

Yeah, just again, what is relevant is the thing I mentioned earlier. What's relevant to each person because it might be a little bit different for what they need. So it's the standardization of it that needs to be implemented.

But then also how do you standardize something that can't be s-... you know like if you're doing a trip in the US for instance, you know what I mean?

Right, but for example let's say you're going to do Shanghai you'll know what the standardized list for China would be. Because we're not going to use just one standardized...

But that's just it, but then there's that work component, right, because now you're creating this standardized list for every city.

or country. Yeah, that's true.

KM Toolkit Question 8/9

PI: So we're going to get off to what [other participant] introduced... is metadata process. So, metadata provides context in meaning of the data represented by a knowledge repository. It's really about identifying how to make the knowledge stored accessible... let's see if there's anything more on that in here... Yeah, so it is a system that draws in data and information from a range of sources called a metadata repository or a metasystem or business intelligence system. So... benefits to this? What potential value do you see in making this process happen?

Faster to find stuff.

Searchability.

yeah, searchability.

PI: Do you think... I think probably there's a bigger answer to the challenges to this. What barriers do you think might exist for something like this?

For implementing this process?

PI: Could be...

Yeah... well I think that [interruption from participant]. Go ahead [participant].

I was just going to say the time of, maybe, implementing it... like to tag things or whatever, the time it takes to go through and do that. But if it's automated it could be faster.

PI: Do you think this is something that could be done?

Mm-hmm.

Yep.

I think so.

I think it needs to be... if it could be done it would have to be very simple. Kind of just like pushing buttons on a screen or something because... just, retraining everybody to actually do it would be really difficult. So, I mean it's kind of like, you know, the CRM that's coming up... that's going to be a whole new training thing and there's going to be a whole set of new skills and difficult and new business processes and I know that we've been talking for years about... okay this is going to change, and we've been preparing people that this is going to change and this is going to, you know, there's going to be some difficulties and we're going to have to rethink how we do things and, you know, so we've been talking about that for a few years and I think that everybody's prepared that that's going to happen finally. But, um, just getting people to get out of their habits and do something new, like, tag notes or something... it would have to be very easy and it would have to be really implemented across the board to make sure it gets done.

Mm-hmm. Yeah, I think you would need, like, it's almost easier when there's a new big system like the CRM coming in where everybody's going to have to learn something new versus trying to get buy in to change something that you already currently do. If we're now talking about the wiki and taking notes and you want people to add hashtags I'm going to guess that you might get fifteen percent of people doing it. And people might do it, again, for like the first month and then that's going to fall off. But if you have a brand new system coming in or a brand new tool like the CRM where everybody has to retrain

their brains for this new process then it's going to be easier to add in new steps, or processes or whatever.

You (to other participant) might know this... are we going to be doing all our notes on the new CRM? Is that kind of the...

Some. Like, um, my understanding is like school notes and things like that.

Oh, so meetings notes are still going to be...

Yeah I don't know where meeting notes are going to be stored.

I think that would still be separate.

That would still be separate? Ok, because I guess what I'm thinking would be, do you know how you can actually put like @... like you can put action items for people? It's like @[email address] and then you would have that on your... I'm thinking the same thing, so at the end of each segment at the top putting #UScurriculum and then you keep going so it's kind of part of the notetaking procedure. At the end of it instead of, you know... just putting in that extra, I'm expecting no more than one or two per item and it's just part of whoever's doing the notes.

I think though too, you also have to... unfortunately with meeting notes I think there's... sometimes there's not buy-in because you think afterwards, well, who's actually reading these, right? Like what's my time and effort worth if, you know, somebody's just going to walk by my desk and ask me tomorrow anyway. And so I think that's sort of a barrier in terms of those types of things. But if it was better and searchable then people would be likely to use them so it goes hand-in-hand.

PI: And does it ever creep in if a particular market is pretty much, like... I know things change, but if you're always the one doing a particular place does that sort of affect the extent to which you would do notes in that example?

Right. Because, you know, who needs to know about [region X] when I'm the only one going there. It's okay to have all the information in my head. Absolutely.

PI: How does it work in on-campus? I'm just thinking you guys are probably closer-knit in terms of everything's happening locally. You're all probably more aware of each other's activities. In terms of notes, how much volume do you think...

Yeah, well I mean I think of like even just like the storing of... because we don't really have team meetings since it's three... like we have kind of a mini team meeting but there's no notes that we keep from it. But I think of stuff like just our individual tasks, like even though I kind of know what everyone's doing, like if [my main teammate] was to just all of a sudden... like if [my main teammate] and [my boss] both left I don't know if I could figure out how to like do the campus tours side of things. Each person kind of

needs to document their own pieces and we try and document a lot of the stuff but I think some of that is just institutional knowledge.

Mm-hmm, like if [your main teammate] had to step in and do the one-day events...

Umm... I like to think I keep some pretty good notes [*group laughs*]. But those are easier, right? That's like a one event. For events we do transition reports and like there are planning pages and stuff like that but I think of something like campus tours, which is just a huge beast that has all of these little pieces. Again, we're starting to document some of them, but...

I think a counsellor tour would be a good example, which is a lot of work, and there are a lot of components to that. But I will say, for example, when I did it my first year compared to doing it my fourth year, my fourth year was like [*snaps fingers*]... I did it in like a fifth of the speed. We knew this worked, we knew this was... I mean I hope to think there were still really good notes and stuff but I guess I just didn't have to think about it.

But even for us, knowing where to go for things, like we have the [departmental shared] drive, like our [team's] folder with all of our subfolders. We have a campus tours drive, which also has a bunch of stuff in it...

Which you can't get into unless you're part of the team.

Yeah [*group laughs*]. But we're looking to get rid of it.

Because I've tried [*laughs*]!

Uh, and we use the wiki. And then emails. And we also use Slack to stay in touch with each other so we just have all of these different kind of places.

To add to that I would say that on this side, for example, group tours. There's nobody really that the group tours affect on this campus except for me like I really don't need to know what tours are happening. Nobody on my team here really needs to know because I do the presentation, I organize it with [the domestic student recruitment team]. So it's like I do have a spot in the wiki but I tend to go back every three or four months and add in the ones that I've done, like it's not something where I'm conscious to make sure I'm always on there because it's not really relevant... it's relevant for later to know what schools visited but most people are out of town anyways when they're visiting so it sort of would be excessive to share all of that information I think, in the moment. Maybe not necessary?

So if you just stopped showing up at work, nobody would have any idea what's going on [*laughs*].

Well that's a good point! Hopefully I can show up to work every day.

<KM Toolkit Question 10>

PI: Okay, so I'm going to move to our last tool, which is lessons learned database. Based on the principle of sharing experience so that mistakes and duplication are avoided, a subset of organizational memory, stored information from past specific experience used to inform present decisions and actions. This tool includes both the process of capturing lessons learned and the design of the database. The tool is intended to preserve experience. So, what do you see as potential value for something like this?

I think for the on-campus team, like I think of this as like a transition report or after all of our events we do like a debrief that we run through what worked and what didn't work and I think for us anyway, of course not duplicating something that didn't work well so that the event is as smooth as possible. So for us it's all about to make it the best experience for the participants. And if you're doing events over and over again you're able to really home in on those kind of tiny details.

PI: And so thinking of... yeah so those are like micro examples of a lessons learned either debrief or report. I wonder too about the idea of like a, sort of, let's pretend it's literally titled the lessons learned database and then you go in there and you... I mean, maybe don't think about that too much but I'm just sort of thinking anywhere from what you're describing up to sort of a broader concept as well. Do you think any advantages to that?

I don't know. Broad would be so tough. Just because what we do is so unique because of... yeah, what we do is so unique. Like what I... my region compared to your region. Like the presentation is 100 slides just because we know that people need... like everyone's presentation itself is like so different based on regions. So I don't know if there's any kind of overarching lessons learned that would be applicable across the board. But I don't know.

Other than for like new hires, if there's kind of like a tips. But, again that could be very specific to like a regional recruiter versus someone who's starting in awards versus on-campus versus e-recruitment.

<49:06>

I think there still could be like a best practices. The best practices start here, and then go to here and then to there, which could apply across the board. Like, generally, you know, look on the wiki first. If you don't find it there then [*group laughs*]... or whatever it is. Like I feel there are general best practices that we all adhere to.

Yeah, that's true.

I mean, where I see this probably having the most impact would be kind of going back to the trip reports, school visits. I mean, if you wanted to get as micro as traffic in Los

Angeles or, you know, Uber drivers in Brazil or which taxi company to use here or there or drivers, like that. So the very nitty gritty, or even, I think that might be effective in our kind of, liaison with admissions. For example, if I go to a school and I learn that they're on a block trimester system and they don't offer APs but their classes are very advanced. Or their, you know, math analysis class is really a pre-calculus class it's just called math analysis. If I could put that somewhere and then when somebody from admissions was evaluating a student from that school they would have all this knowledge so that they could better understand that school.

It would also be nice to know who in admissions to send that to.

Yeah, but that's a different... I mean, I don't think we're getting into that.

No, but in terms of like a broad-based things to learn it's like, okay, if this is coming up in admissions... like, who to contact? Or, if you had a question about a faculty, who's the contact for [our department]? So, relationship management lessons.

<KM Toolkit Question 11>

PI: Yeah and that's a whole area as well. Which falls under... really... that umbrella. So it's definitely something to look at. So on the flip side, what would the barriers be to this?

Using it. Like people actually going back to read the information.

I think, it's just, again, and this goes back to what [other participant] was talking about like the Uber drivers in Brazil or whatever... we need a lessons learned database but it will need to be very specific. To a specific region or a specific event or... It's good to have these and I want to have these but it would just have to be a lot more micro than on like a bigger level just because what we do is very specific to specific areas or events or whatever. So I think it's important to have but it's not like one we can look at, we have to... kind of like looking at the v-drive, you have to go through like a thousand folders before you can hit what you want. Same thing. It's just that because what we do is so unique we'll need that layers of information.

PI: And it may be that, you know, with each of these tools there is some overlap between what they're all doing. So, for example, lessons learned database... there may be traits of that that are incorporated within the data capture or process. So, yeah, its... yeah, I hear what you're saying though like particularly on a broad-based perspective it's probably a little more challenging, you know, to do that. But, yeah, apart from perhaps more of a general best practices it's either got to be, potentially, pretty general or very specific that's not something that would apply to all units as opposed to each one.

<Summary Question 12>

PI: Ok, so those are the four and then we've just got the last twenty minutes we're just going to go through some summary type questions. So, overall, how might the types of



knowledge outlined in the four tools described be useful and how? And then, in this regard, which KM tool would be most valuable and the least valuable. I can pull up the... I can go back to earlier ones if you want to look back. But, again, it was select process, storage process, metadata process and the lessons learned database.

For me most valuable would be like storage and metadata. Something that makes it easier... something that cuts down the time to find the information we're looking for. Yep, that's by far the most valuable for me.

PI: Any detractors? Anybody else?

I think storage combined with metadata. Because, like, it's great if it's stored but if I can't find it.

PI: How about you guys? Any other thoughts about the other two? No?

I mean, the other two obviously are important because if the information stored is not... is useless, then it doesn't matter if I can find it or not. It's irrelevant information. So it's tough to say because like if I can find it but it doesn't help me that's not going to be helpful either. So I guess it's tough to say something is more useful than something else. I guess the relevancy of it is also extremely important for me. So it's about... if you have relevant information somewhere and you can't find it, it's the same problem. So I think it's tough to say what's more valuable and what's less valuable. I think that the lessons learned, I really liked the idea of that but that, if you had to choose something that was... you can still make do without. You make it work. You figure it out. We're all pretty flexible, adaptable people who can kind of figure it out as we go... it's a very much nice to have but I think in having relevant, easily... searchable information is kind of the most important.

PI: So, if you were to... maybe I'll ask each of you this. This is kind of off the cuff but if you were to rank order again the knowledge selection versus storage versus metadata versus lessons learned, how do you think that would look? I know it's probably tough because some of them are interconnected but...

It's also hard to say what's least valuable.

PI: Yeah. Or if not that then bringing in the other half of this question of, by default, least valuable sounds like most would say the lessons learned... but it's a good point around the select process. What knowledge to capture.

That [select process] for me is actually still the most important. Because, I mean, it might take some of my time but let's say someone left and that information was at least somewhere there, I prefer to have it somewhere there than having to search [group talking over each other]... I'd rather have that information be somewhere there and difficult to find than being able to find useless information [*laughs*].

Versus recreating information yourself.

Yep. I guess. If I had to choose an order. But yeah, it's tough.

Yeah, no, for me it would still be searchable first because at the end of the day I don't want to search forever, not have it be relevant and then have to go back and recreate it. I would either rather... I could search quickly, determine whether or not it was going to be helpful to me. Like that's... yeah.

PI: There are no right or wrong answers.

Nope, that's where I'm stickin' [*laughs*].

<Summary Question 13>

PI: Alright. Let's go on to the next. So overall, what would you see as the most likely implementation barriers for these KM tools? And again, which ones do you think would be easiest and most difficult to implement?

I think time is the biggest barrier, which is something we talked about because all of them it requires starting a new process and making sure that you adapt to it and take that extra time each time [*sound cut out*]...

Yeah, time and buy-in.

Now what would be easiest? Oh, please speak [*speaking to other participant*]

No I just said time and buy-in, like getting everybody on board, you know, to do the same thing is challenging.

PI: Maybe a bit of systems-fatigue?

Mm-hmm.

Yeah.

Also in terms of what would be easiest to implement is probably when we're talking about what we're actually capturing. Because if we just took the time once to create a template, or the kinds of things you want to do and then that's always where you go. So, for instance, trip planning templates are already there and every time I want to start a page I just click it – it's right there and it tells me what to do. And so that saves me a lot of time having to think about, oh what do I have to do? There's already a check box, it's right there. So, I think that would be the easiest to implement.

I think the same thing [*select process*]... we should almost have questions you have to answer for each school visit or for each event so like a set amount of like, these are like

the four questions, you know, how many people showed up? X, Y... you know... we kind of do. But like half the time I don't see numbers ever and so I'm like luckily no one has left from our team... I mean, a few people, but... the knowledge is still there and will literally go to somebody and say, hey, I know you went to Bangkok last year and you went here last year, how many brochures should I take? And then, it's literally like the day before I send my shipment that I'm asking that question because I can't find the information anywhere so... it's, yeah, I think there needs to be a bit more standardization.

<Extra Discussion>

PI: Alright. I was just thinking on that... maybe also thinking about, apart from... so there's sort of the institutional [department] knowledge and, you know, maybe the non-process... sorry, I'm just going to plug this in – it's gonna die. You know, thinking about those sort of relationships that might exist that certain people either within your unit, or [your department] at other levels, might have. Any thoughts about that? Or even the not knowing what you don't know factor of knowledge that exists and may or may not impact you... I guess there's sort of... thinking about that kind of... maybe more the implicit knowledge as opposed to the explicit, tactical, operational knowledge that is typically easier to codify and identify and record and absorb. There's the other sort of more... maybe knowledge about what it's like travelling in a region, cultural... maybe it's how does [your department] work? What's the current temperature between [your department] and Engineering or Admissions or that kind of thing.

Yeah, I think that's a lot of what we get from our fellow colleagues and sort of, yeah, that casual exchange of information versus a formal sort of thing. Although, my first trip to [country X], which I think is a great example, like the people who have gone previously in that area were [Region 1, teammate 1] and [the director] and [other participant] wasn't here that fall and so [another teammate] took me for coffee so we could talk about what I should wear. Like what I should pack as a, you know, like can shoulders show in some countries? Do I need to be fully covered, like what's going to be an acceptable... and sort of talking about what it was like as a female travelling in that part of the world. And so I think those types of... but that was a very informal type conversation, but it was nice to know that somebody in the general [department] had that knowledge to provide to me, you know?

Exactly, you know, even when we email faculty members, we're pretty... we say, like, you know in Malaysia please make sure that you get covered because, culturally, that's not okay so definitely important knowledge to have.

Which, sometimes if it's just innate knowledge and you're going back to the same place all the time you forget to potentially... it's not like something you're putting on a trip report, you know?

I think, Marc, the most difficult might be though, like you were saying, the temperature of like [our department] with [faculty X] or [our department] with this or, you know, the advising office here or the advising office there because that involves people and that's,

you know, nobody wants to write that down [laughs]. Do you know what I mean, because it can be very sensitive, right? We're not just saying [our department] versus [faculty X]... it's, oh, I have an issue with this person, or I like to deal with this person. You know, you're very cautious that if there are difficulties, how do you... it's great if everything's working great, you can celebrate that and write that down but if there are difficulties often it's, you know, personalities involved or just... it's just really hard to write that down because that could be used against you or something in the future.

PI: It's a good point. What do you think you could do to get around that. Like if it was felt that that was important knowledge for certain others to have. Like I guess I'm thinking also, similar to, [participant], your idea about, you know, within the [department's] profile if you typed in... or if you looked at different individuals and it said, you know, relationship knowledge around da-da-da-daa. Like maybe more of a general... either a go-to contact and then it's maybe it's not a written down reference but before I go and deal with so-and-so, I know that this person's an expert in the [department-to-faculty X] relations, or something like that. Do you think that would be something that maybe...

I think it would be useful. The only thing would be how to pass that knowledge on, for example, if that person who was that expert left, would all the knowledge that they had about that relationship still get passed on or would it end there and we'd have to start from the beginning again?

PI: That's a very good question.

I think, also, it's... that's great, let's say [other participant] is our [faculty Y] guru and knows everything in and out about who to contact in [faculty Y], how to approach them and everything. Well, [other participant] is on a three-week trip, you know... the time zone's different and I need to contact [faculty Y] today. You know, it's great until it's not, kind of thing.

And I would say that does happen... not super often, but often enough here when I'm the only advisor on this campus and then it's like, oh, I don't know the answer to this question... I need to figure out who to ask. Well, most travelling recruiters are gone at the same period. So it's like, ah, I have to go through this rolodex of like, who might be on this campus that might know this specific question and be able to answer it for me even in this time period.

PI: Um, no, that's good. I think... it's just interesting too because I think the hard part for me in looking at this topic is thinking... like I instantly go to, what is the... there must be a technological, sort of, solution to do all of this. And sometimes it isn't, but, you know, for example, storytelling is often a form of knowledge management. It's a way of getting one concept into multiple peoples' heads so that then it resonates. But then, again, as you mention this is another example of that of, well, whoever... if it's not written down then there's a risk it leaves. But just sort of that, you know, before the printing press the town crier got out there... well, actually, that was after the printing press... but before it was

out to the masses that was a way of getting information out there. So it's trying to think of all of the non-technical and technical possible solutions but also how to do it in a way that is not, again, overcomplicated. Trying to find, often, single-source these days is the ideal. Anyway...

The other thing that you said was also what do you not know?

Yeah, what don't you know?

Yeah what do you not know? And there's a lot of things I feel like I don't know. There are a lot of people who have a lot of expertise on our team, which I don't feel like I've... we take advantage of. Because we know what we're doing and we can do what we do, but I know that I can do whatever I do better if I, kind of, get help and advice from other people but I don't know sometimes what people know. But, for example, I think it was actually [other participant] who showed me I could actually search for all students from one school on [student registration system] at one time, which I think he learned from someone else on [Region 1 team]. I've never done that. I had no idea you could do that. And it saved me so much time during file completion. Like it literally saved me fifty percent of my time. But I didn't know. No one had ever shown me that. I mean it's one small example but, again...

no that's a big example [*laughs*]!

Yeah, it's a huge example. Like I can now do my file completion, honestly, in like fifty percent of the time just because now I can go through everybody in that school. Instead of clicking one right button and entering the new student number each time. Correct. I didn't know that. But I think it's an example of, nobody ever showed that to me. When I learned [about the student registration system] I didn't even know that was a possibility. But, again, presentation skills when it comes to, you know, there's so much knowledge, like... for example, [other participant] did an open house recently and that's so much different from what we do. The opportunities for that information to be shared just don't happen very often. So there's a lot of knowledge that I don't... that, again, things are working fine and I'm able to do my job within time and well so I don't always solicit for things... how can I do it better? And that knowledge I know exists but, again, I don't know what I don't know. But, until I do and I'm like, man, with five years of file completion I could have done it in like half the amount of time. Things like that where... but I don't know how to... I just don't know how I would get that information... what that would look like.

PI: Do you think there's a... organizational solution to providing more time for that? Would there be, you know... or, as well, would there be a position or something like that where there's like an information person or knowledge... like somebody who's facilitating trying to both record or create templates or, you know, that kind of thing? Thoughts on either of those or other?

I think some of those things come up at the retreats it seems. Once, like, we seemed to focus on some of those things. But then it isn't always, as we mentioned before, documented to then go back and look at. Sometimes it is and sometimes it isn't. I think those are really important times when we pick a specific topic and go over it. So for example you could have like [a student registration system] tips thing and go through it specifically, but to document it would be super important to follow up later so you don't have to keep repeating it.

I think sometimes too, like... sorry, I'm going to use [other participant's] example because it is a great one where it's a little thing but it's a huge time saver. But we also think it's a little thing and you also think oh, well everyone else must have known that so what's the point in sharing, right? And so you make assumpt... you don't know...

You don't know... right, I think that's exactly what it is because I also sometimes assume like, oh, everybody will know... knows how to do this but.

Yeah, and so when we... we went through a phase for a little while with the recruiter meetings where we had the tips and tricks and things like that... but I do... I think people didn't... nothing seemed grandiose enough to bring up and it really was about... like it is, it's those little things that make huge time savers or adjustments. You know, [other participant] is apparently the man who knows things because he also showed me how to speed up my transitions on my [applicant event] presentation by just small little seconds, so. That one slide that took me ten seconds to load that I was complaining about... this slide takes ten seconds to load! And [other participant] goes, just speed up the individual transitions and I was like, ahhh! Who knew?

I think that also has to do with... not personality, that's not the word I'm looking for, I don't know what the word I'm looking for is, but like... so for example if I, sometimes if I want to do something on, you know, the [student registration system] and I don't know how to do it I'll, like, try and figure it out. And I think there's people who instantly go to okay I'm going to try to figure this out and then there's other people who are like, oh, no I don't want to... like I think of my mom and the Internet, right? Like she doesn't want to touch anything because she might accidentally do something that's irreversible, whereas I would just, you know... So I think there's people who are just like I'm going for it and I'm gonna, you know, try... for better or for worse because sometimes it does backfire like oops I tried this and I shouldn't have done that and then other people who are like, well no, it wouldn't even occur to me to go searching for an answer. This is what I have... the tool I have, and this is how I've been trained on it and it wouldn't occur to me to do something...

And also having the ability to ask because for me I was always like [supervisor] how do you do this? [Supervisor], [supervisor]. Always asking her because I know she has that base of knowledge but I think some people would probably feel uncomfortable constantly asking her questions like, can you show me this, can you show me this?

And I think it just depends like, for example, I, for some reason, get asked about [the online expense reconciliation system] questions like everyday by, like, all sorts of people and I'm like I do not want to be that person but [*laughs*]... it's like you never know...

you now have that reputation.

Yeah, so [*laughs*]. But I think it just depends on... like I guess with the [student registration system] thing I did... like as [other participant] said, I didn't know that could be done so I didn't think of what to ask because I thought I was already doing it the best way possible. So I think it's things like that. I mean, it's just one example.

I would also say too, similar to what [other participant] said, there are some people who go out and figure it out, but then there's also the people who share. Like [other participant] frequently, you know, I had... apparently I've had lots of tech issues lately. Like my printer wasn't working and I was bitching about it out loud and so [other participant] finally goes "did you know that you can print remotely?" No. There's an email that you can send. You can go in the back printer room, put in the email and print your documents. They come in as a pdf.

Oh I didn't know that.

Yeah, so when your printer breaks down, or the connection breaks down... and so [other participant] tends to be quite good at sharing what she knows and discovers which is great.

For example, and I think in [the larger campus], this happens a lot more... but sometimes I feel like the [remote representatives], and I mean, [colleague X] is a great example, but I know sometimes they miss out on a lot of these kind of conversations that just happen so frequently and then they happen, you've done your work, you're good but then, you know... it's quite rare sometimes that a lot of that information gets kind of passed on to some of our [remote representatives] just because we've kind of moved on from that by the time we actually see them, like I only see the [remote representatives] every other week, so... and there's always like a thousand other things we're talking about.

And I guess too the beauty of, like, our new space now is like you overhear stuff.

Yeah.

Mm-hmm.

And you're like, wait a minute, are you talking about this? What is the answer to that? You know? So that's always nice too.

PI: Final question. Which I think I probably could have put up a little bit earlier. But, are there any other things you'd like to mention around knowledge management? This has been a pretty good... you guys are a good focus group. Thank you. But, yeah, any other

thoughts on any of this? I'm assuming not and, if you do, you can let me know afterwards.

<end 1:17:13>