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The impact of national culture on the effectiveness of inter-
organizational knowledge transfer

Yie LI

A Thesis

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ABSTRACT

The impact of national culture on the effectiveness of inter-organizational knowledge transfer

Yie LI

In today's business climate, organizational knowledge has been widely accepted as a principle organizational source for sustainable advantages for global competitiveness. Inter-organizational knowledge transfer lays a significant foundation for obtaining new organizational knowledge. The role of middle managers in inter-organizational knowledge transfer is getting more and more attentions nowadays although it cannot be more than enough. In addition, considerable evidence supports the importance of culture in the success or failure of knowledge transfer within organizations.

The main purpose of this research is to identify what roles of middle managers play in each stage of inter-organizational knowledge transfer as well as the impact of national culture on such roles. The research used a case study methodology and was conducted among Canadian, American and Chinese middle managers in two well-known multinational organizations. The findings suggest that first, middle managers play the roles of Radar, Filter and Champion in the initiation stage, the role of Coordinator in the interrelation stage and the role of Problem solver in the implementation stage; second, Chinese middle managers are involved less than those from North America in the activity "Suggesting and prioritizing the different courses of action to acquire new knowledge",

“Defining and justifying the importance of new knowledge transfer proposals to upper-level managers” and “Embedding the newly acquired knowledge in organizational processes and routines”. This study opens new insights of research in knowledge transfer that link up the roles of middle managers, national culture, and the effectiveness of knowledge transfer.

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Chapter 1 Introduction

Knowledge-based theory of the firm

During an era where the market is rapidly becoming more globalized, competition among modern global enterprises is getting keener. To succeed in such amplified competitions, corporations must possess vastly different sources to obtain a competitive advantage. They “must continuously redefine their strategies and invest in organizational capabilities that will make them successful” by “the accumulation and deployment of appropriate organizational capabilities” (Floyd 1996, p.13). In today’s business climate, organizational knowledge has been widely accepted as a principle organizational source for sustainable advantages for global competitiveness. Such knowledge “are embedded deeply within a firm’s sociology, not in specific technologies or in the minds of individuals but in the collective efforts emerging day-to-day from interactions among people over time” (Floyd 1996, p.13).

Having knowledgeable workers inside an organization, however, is not enough to create unique organizational knowledge; collective efforts by workers to turn individual knowledge into organizational knowledge is required to create superior core capabilities in comparison to other organizations. That is, organizations need to transfer individual knowledge into the reservoir of the organizational knowledge. As a result, this transfer highlights the importance of middle managers who are located at the center of the organizational information network to bring all the people together to initiate and facilitate the process of knowledge transfer. In addition, knowledge transfer among

individuals is a conceptual work that is influenced by personal value determined by national culture. Thus, the role of middle managers and national culture are very important factors for this knowledge transfer that should not be overlooked, especially for multinational corporations that cross geographical borders. This paper uses case studies to investigate how the roles of middle managers and national culture impact the process of inter-organizational knowledge transfer. To get a better understanding of such impact, we have to know what is knowledge and knowledge transfer, and why they are important.

Organizational knowledge and sustained competitive advantage

With the transition from an industrial to an information society, and then from an information to a knowledge society, the meaning of knowledge has transformed from being technology to production resource, and further to social and economic organizational resources. Nowadays, organizational knowledge has been widely accepted as a key source of sustainable advantage for global competitiveness (Bolino n.d.; Inkpen 1998; Gupta 2000; Huber 2001; Bhagat et al. 2002; Yoo and Torrey 2002). Gupta and Govindarajan (2000) pointed out that “of all possible resources that a firm might possess, its knowledge base has perhaps the greatest ability to serve as a source of sustainable differentiation and hence competitive advantage,” (p. 20) while Robert (1997) mentioned that “knowledge is the overwhelmingly important productive resource in terms of its contribution to value added and its strategic significance” (p. 451). Some researchers stated that the survival and success of firms in today’s keen competitive society depends on how effectively they acquire, create, develop, exploit, and utilize knowledge better than their competitors (Inkpen 1998; Huber 2001). Knowledge is “the lowest common

denominator that defines a firm's ability to handle the evolution of its competitive environment and uncertainty in general" (Albino 1999, p.53).

Knowledge has been defined in various ways such as "what people in an organization know about customers, products, processes, mistakes, and successes" by Grayson (1998, p.23), or "an abstract concept that is consciously or unconsciously built by the interpretation of a set of information acquired through experience and meditation on the experience itself, and that is able to give its owner a mental and/or physical ability (Albino 1999). Organizational knowledge is defined as "the capability members of an organization have developed to draw distinctions in the process of carrying out their work, in particular concrete contexts, by enacting sets of generalizations (propositional statements) whose application depends on historically evolved collective understanding and experiences" (Abou-Zeid Forthcoming, p.3).

To understand knowledge, it's vital to distinct the two dimensions of knowledge. Polanyi (1983) classified knowledge as either *explicit* or *tacit*. Explicit, also called codified knowledge, is "knowledge that is transmittable in formal, systematic language" while tacit knowledge refers to that "has a personal quality, which makes it hard to formalize and communicate" (Nonaka 1994, p.20). Explicit knowledge is systematic, and it can be communicated and shared with others, easily codified into hard data and embedded in formal rules, tools, and processes (De Long and Fahey, 2000; Inkpen, 1998). Tacit knowledge is indwelled in the individual, hard to explain and formalize, and difficult to

communicate and share. “In organizations, tacit knowledge involves intangible factors embedded in personal beliefs, experiences, and values” (Inkpen 1998, p.74).

Why can organizational knowledge have such preeminent capacity to increase competitive advantage? The main reason is its inimitability for competitors. As markets and businesses become more globalized, competitions among modern global enterprises are getting keener. Corporations have to be as knowledgeable as possible in order to provide more specific and personal products or services to their clients and customers quickly. As a result, the more difficult corporation knowledge can be imitated, the more competitive advantage they possess. Organizational knowledge resides within organizations and is hard to be replicated by company’s competitors. The value that organizational knowledge provides to organizations is “developed or made valuable inside organizations rather than purchased” (Argote 2000). “The broader the scope of the knowledge integrated within a capability, then the more difficult limitation becomes. The complexity of ‘broad-scale’ integration creates greater causal ambiguity and greater barriers to replication” (Robert 1996). Furthermore, organizational knowledge base can be expanded when shared. As one unit (individual, business units, organizations, or alliances) shares knowledge with other units, its knowledge can be amplified, modified, and clarified. New knowledge brings new skills that lead to renewal and sustainable competitive advantage for organizations (Argote 2000).

The continuing request for distinct organizational knowledge forces corporations to think about how new knowledge can be developed, retained, transferred, integrated, and shared

within organizations. They can either use knowledge already embedded or create new knowledge. However, no matter what kind of knowledge they use, sharing experiences and knowledge and cooperation among individuals or units is a must for creating and using knowledge. Thus, transferring knowledge is a necessary process for creating and using knowledge intelligently. “Knowledge transfer is a critical factor for a firm, necessary to rapidly respond to changes, innovate and achieve competitive success” (Albino 1999, p.53). Hoarding individual knowledge is nothing but a barrier to transfer knowledge efficiently, which leads to low performance of knowledge management. Only with collaboration by sharing and communicating individual knowledge, the best and most updated knowledge can be transferred rapidly and widely within organizations, which improves inherent knowledge usage and the creation of new knowledge that can provide a sustainable competitive advantage for an organization (Argote 2000; Lord 2000).

The importance of inter-organizational knowledge transfer in acquiring knowledge

Knowledge transfer, defined by Argote and Ingram (2000), is “the process through which one unit is affected by the experience of another” (p.151). The process of knowledge transfer consists of “the systematically developed set of organization information, skills, and procedures that relocate” (Bolino n.d., p.6) from a supplier unit to a recipient unit. The ability to transfer knowledge from one unit to another has been found to “contribute

to the organizational performance of firms” and is “a basis for competitive advantage in firms” (Argote 2000), especially for multinational corporations (MNCs).

Corporations can transfer knowledge from external markets, such as customers or competitors, or among internal units. External markets are usually considered as ineffective mechanisms that have minor importance for knowledge creation no matter how sophisticated the external markets (Gupta 2000; Pedersen 2000). Gupta and Govindarajan (2000) pointed out that the tacitness and non-tradability of the existing external knowledge and the risk of new competitor creation is the reason for the minor importance of external markets. Furthermore, with the decentralization of corporations, subsidiaries play increasingly critical roles and “become primary actors in the learning process, initiating the research for new information and facilitating the transfer, the adaptation and the assimilation of new knowledge” (Bolino n.d., p.6). Thus, inter-organizational knowledge transfer lays a significant foundation for obtaining new knowledge. Ladd and Ward (2002) pointed out that “knowledge transfer within an organization might represent a low-cost alternative to the creation, codification, and capture of new knowledge” (p.2). They also cited one practitioner who said, “We used to say knowledge is power. Now we say sharing is power” (Pederson 1998 in Ladd 2002, p.2).

The very reason for MNCs’ existence and growth is their superior ability to transfer cross-border knowledge easily and rapidly within a worldwide range, which also provides a vast pool of resources for new knowledge (Gupta 2000; Pedersen 2000). Inter-

organizational knowledge transfer provides effective vehicles for MNCs to acquire superior abroad knowledge and practice that offer opportunities for worldwide leverage. The clear superiority of MNCs in inter-organizational knowledge transfer across borders is shown in the transfer of both explicit and tacit knowledge. “In the case of explicit knowledge, firms can utilize their internal information systems to transfer explicit knowledge at low costs while using secrecy and other mechanisms to permit appropriability of their explicit knowledge. In the case of tacit knowledge, firms have the opportunity to transfer personnel at lower costs than can international labor markets, and can facilitate tacit knowledge transfer both through training and through the conversion of tacit into explicit knowledge” (Almeida 1998, p.5). The capabilities of effective cross-border dissemination throughout spatially dispersed MNCs of valuable organizational knowledge inhabited or developed within their local subsidiaries become increasingly critical as competition among multinational and global organizations intensifies and distinguishes the MNCs from purely domestic firms (Pedersen 2000; Bhagat et al. 2002).

Inside multinational corporations, “units can learn from each other and benefit from new knowledge developed by other units. ... Knowledge transfer among organizational units provides opportunities for mutual learning and interunit cooperation that stimulate the creation of new knowledge and, at the same time, contribute to organizational units' ability to innovate” (Tsai 2001). Such cooperation or learning enables units to get access to new specialized knowledge or best practices acquired in other units abroad for their business domain expansion and adaptability for a new environment. “Preventing individuals from repeating the mistakes of other individuals “ (Ladd 2002) and

“leveraging the existing knowledge in the organization” (Anonymous 2001) may help to enhance units’ performance.

The role of middle managers in inter-organizational knowledge transfer

Managers integrate people, process, and technology of organizations into organizational strategies and solutions. Such integrations of organizational resources become an important factor that conduces or stifles knowledge sharing and transfer within organizations. Thus, managers play a crucial role in facilitating the success of inter-organizational knowledge transfer. There is, however, a lack of research, especially empirical research, on the study of middle managers’ roles in the knowledge transfer process.

There are various levels of managers who play different roles and take various responsibilities in organizations. Three main levels of managers can be found in organizations: top managers, middle managers, and frontline managers. Top managers “articulate(s) the dreams of the firm” (Nonaka 1994, p.29) and “shape the organizational context in which knowledge transfer takes place” (Chung 2001, p.5). Frontline managers look at realities and deal with “day-to-day details of particular technologies, products and markets” (Nonaka 1994, p.29). And middle managers “are located somewhere between the strategic apex and the operating core of the organization” (Floyd 1996, p.12). In the 1980’s, the importance of middle managers in organizations was questioned with the

development of information technology and globalization. Many researchers suggested, however, that middle managers should not be eliminated, but should change their roles in the new information society (Janczak n.d.; Nonaka 1994; Floyd 1996). “What today’s economy needs is not the elimination of middle management but rather a new vision of leadership from the middle. ... Middle managers’ role in capability development arises because they are at the nexus of the social interactions that build organizational knowledge and skills” (Floyd 1996, p.12). Floyd (1996) suggested that the leadership of middle managers has been changed:

- From coordinating within the corporation to managing relationships across organization boundaries (p.8),
- From controlling growth to finding innovation (p.9),
- From executing plans to encouraging an evolving mindset (p.10), and
- From applying new technologies to transferring technology with the organization (p.10).

Middle managers are “at the intersections of both vertical and horizontal flows of information in the company” (Nonaka 1994, p.29). From vertical aspects, they are bridges between top and frontline managers. They have practical knowledge coming from frontline managers as well as strategic knowledge from top managers. They filter, translate, and pass “the language, the symbols and intentions of both top and first line management thereby promoting effective communication among these actors” (Janczak 1999, p.8). Their abilities for such translations from “organization’s policies and strategies into practices and action” (Janczak 1999, p.10) directly influence the

performance and learning efficiency of organizations. Middle managers narrow the gap between top managers and frontline managers and facilitate knowledge transfer by synthesizing “the tacit knowledge of both frontline employees and top management, make it explicit, and incorporate it into new technologies and products” (Nonaka 1994, p.29). “Over time, they develop a rich knowledge base that combines strategic awareness with operating experience” (Floyd 1996, p.13) by talking in both upward and downward directions. But they are not only channels from top managers to frontline managers or from frontline managers to top managers. Blumentritt and Hardie (2000) pointed out that the middle manager “becomes principally an intermediary between lateral groups” because much of the required knowledge comes from “other departments and groups within the organization” and/or “groups and individuals outside the organization”, while little knowledge comes from senior management (Blumentritt 2000, p.41). They provide a broader context for frontline managers who are narrowly focused on their own perspectives. Middle managers orient communications of important information among frontline managers toward purposeful knowledge creation (Nonaka 1994).

In addition, knowledge transfer “is not only simply a matter of providing data to the right person. It requires an understanding of the recipient’s needs and ways of thinking; and a respect and trust by the recipient for the source of the information. These factors come only through prolonged personal interaction between the people involved” (Blumentritt 2000, p.43). On this point, middle managers have substantial advantage over top managers or front-line managers because they can establish such interactions much easier through their daily contacts with other levels or groups of people.

According to Mintzberg in Floyd and Lane, “managers’ primary roles involve gathering and dissemination of information, making managers a nexus for information flows within the organization” (Floyd 2000, p.15). Such roles are defined so generally to managers in all fields that they are not sufficient for specific area or practices such as knowledge management. To get a better understanding of how middle managers can facilitate or inhibit effective knowledge transfer, one should ask, ‘What roles middle managers play in the process of transferring knowledge to improve the efficiency?’

“A role is the set of behaviors that others expect of individuals in a certain context” (Floyd 2000, p.33). According to Floyd and Lane (2000), expectations can be in two forms. One set of behaviours is overtly stated (formally written down) and the other is covertly held. No matter which form it takes, expectations may “develop in the context of other interdependent behaviors and expectations that make up a social system. The observable behaviors of any role reflect that social system's underlying conceptual structure and its mindset or dominant logic” (Floyd 2000, p.33).

The role of middle managers is getting more and more attentions nowadays although it cannot be more than enough. Several scholars investigated such roles and give their own propositions for middle managers. Janczak (1999) suggests such roles as “resource allocators, innovators, participants in strategic conversation, change implementers, and new product developers” (p.8). Rory Chase, in *Managing Director of IFS International in Bedford*, mentioned such roles from his first-hand experience as “team leader, change

maker and facilitator” (Towers 1996, p.1). He “explains that team leadership is about setting an example, establishing a good role model and actively leading from the front”, while change maker “means being innovative, looking for continual improvement and interpreting the needs of senior management, staff and customers alike” and “facilitator is about getting the right things to happen” (Towers 1996, p.1). Again, these roles are very general in all areas within an organization. One might ask that if middle managers play all of these roles in the knowledge management area. What are the roles of middle managers during the process of knowledge transfer?

Von Krogh et al. (2000) identified the importance of knowledge activists, who are defined as “someone who connects external and internal knowledge initiatives and mobilizes workers throughout the organization to use knowledge more effectively” (p.4), in the process of knowledge creation. They expound the purpose of knowledge activists as “initiating and focusing knowledge creation; reducing the time and cost necessary for knowledge creation; leveraging knowledge-creation initiatives throughout the corporation; improving the conditions of those engaged in knowledge creation by relating their activities to the company’s biggest picture; preparing participants in knowledge creation for new tasks in which their knowledge is needed; and including the perspective of microcommunities in the larger debate on organizational transformation” (Von Krogh et al. 2000, p.148). Anybody in the organization can be a knowledge activist, but middle managers are in a better position to take such activities since they are located at the center of the knowledge network in the organization. Von Krogh et al. (2000) also identify three roles of knowledge activists as

- Catalysts of knowledge creation who trigger the process and create enabling contexts of knowledge creation (p.150);
- Coordinators of knowledge-creation initiatives who facilitate the connections of knowledge-creation initiatives within organizations; and
- Merchants of foresight who “maintain a bird’s eye perspective, soaring beyond the many specific interactions in an organizational to look at the company from above” (p.157).

Floyd and Wooldridge provided a model to define middle management’s four strategic roles in the following table:

		<i>Behavioral</i>	
		Upward	Downward
<i>Cognitive</i>	Divergent	Championing Alternatives	Facilitating Adaptability
	Integrative	Synthesizing Information	Implementing Deliberate Strategy

Figure 1.1: A typology of middle management involvement in strategy

(Source: Floyd 1992)

- Championing strategic alternatives “is how middle managers promote strategic initiatives to their superiors and in the process diversify the organization’s repertoire of capabilities” (p.54);
- Synthesizing information “is a subjective process by which middle managers inject strategic meaning into operating and strategic information and communicate their interpretations to others” (p.69);
- Facilitating adaptability is “the nurturing and development of experimental programs and organizational arrangements that increase organizational flexibility, encourage organizational learning, and expand the firm’s repertoire of potential strategic responses” (p.84); and
- Implementing deliberate strategy is “a series of interventions designed to align organizational action with strategic intent” (p.96).

Janczak provided the following organizational knowledge integration modes that contain several roles of middle managers based on the study of 59 projects by 41 middle managers (Janczak n.d.).

- The “analytic mode” presents “a pattern of activities through which middle managers offered new knowledge to their departments and clients.” Under this mode, middle managers “seek information, clarify goals with top managers, collect knowledge, and select knowledge by filtering what and to whom they will inform, and finally, offer a product and standardizing solutions” (p.6). According to Janczak, analysts played two main roles as,

- Problemistic searchers who “sought solutions to be implemented and problems to be solved;” (p.6)
- Passive filters who “select information to tell other managers and subordinates.” (p.6)
- The “intuitive knowledge mode” presents “a pattern of activities through which middle managers created new knowledge for their departments and clients.” Intuitive managers “explored their environment, got a personal commitment, experiment, created new knowledge, actively filtered information and celebrated good results” (Janczak n.d., p.7). Middle managers can play four roles within this mode as,
 - Radars “discovering risks, opportunities, problems and solutions that were not explicitly linked to the situation” as well as “generating knowledge maps for future initiatives.” (p.8).
 - Catalysts who can be “triggers of individual knowledge sharing.” (p.8) These catalysts connect knowledgeable people, put ideas together, and develop a good climate to stimulate the creation of new solutions and problems;
 - Active filters who “amplified, attenuated and modified information, introducing a personal emphasis” (p.8) and
 - Experimenters who “experimented and shared knowledge and prototyped new designs.” (p.8)
- The “pragmatic knowledge mode” which presents “a pattern of activities through which middle managers adapted existing knowledge to new uses in their

departments and clients.” (Janczak n.d., p.9) There are three roles under this mode such as,

- Opportunistic searchers who “selected and undertook achievable goals” (p.10).
- Connectors who continuously “interact(ed) with other middle managers” (p.10) and
- Missionaries who “tried to sell a message which could be adopted by the organization.” (p.10)

Based on a survey of 250 middle managers working in Greek public services, Michalopoulos and Psychogios (2002) defined middle managers’ roles in public services as an “implementer” who translates “decisions, policies and strategies into action plans and practical procedures within an organization,” (p.12) as a “facilitator” who “assists into the adoption and implementation of any kind of innovation by helping them pass through the organizational agenda,” (p.15) and as a “synthesizer” who “transmits any kind of information coming from everywhere inside or outside the organization effectively (to) everywhere within the organization” (p.18).

Cross-border (cross-cultural) knowledge transfer and the impact of national culture

Considerable evidence supports the importance of culture in the success or failure of knowledge management within organizations. Knowledge and culture are indissolubly linked together in organizations. “Any discussion of knowledge in organizational settings

without explicit reference to its cultural context is likely to be misleading” (De Long and Fahey 2000, p.115). “Organization can’t create knowledge without individual, unless individual knowledge is shared with other individuals and groups, the knowledge will have a limited impact on organizational effectiveness” (Inkpen 1998, p.71). “Managing knowledge involves people at some of their deepest levels of emotion and belief” (Yoo and Torrey 2002, p.425). However, “people of different ethnic backgrounds possess different attitudes, values and norms that reflect their cultural heritages” (Cox 1991, p.829). If “the tools and processes designed to manage the knowledge and facilitate the sharing do not take into account the differing national cultures represented by the different parts of the organization, there will be severe impediments preventing the vital circulation of the modern enterprise’s life’s blood – knowledge” (Yoo and Torrey 2002, p.425). This issue is especially important for MNCs since the intra-organizational knowledge transfer involves units from various cultural backgrounds. Furthermore, these cultural differences will be manifested in knowledge-related behaviors that influence the effectiveness of knowledge transfer.

Culture is “a pattern of basic assumptions -- invented, discovered, or developed by a given group as it learns to cope with its problems of external adaptation and internal integration -- that has worked well enough to be considered valid and, therefore, to be taught to new members as the correct way to perceive, think and feel in relation to those problems” (Schein 1985, p.9). “Culture subtly facilitates the expression of certain behaviors and inhibits other behaviors” (Michael 1997, p.83). Researchers suggest different manifestation of culture. For example, De Long and Fahey (2000) suggested

that values, norms, and practices are reflections of culture, while Hofstede et al. (1990) categorized culture into values and practices subsuming symbols, heroes, and rituals. No matter how researchers defined culture, however, there is a common view that culture has at least two layers: the inner layer and the core. The core of culture is value, which is “a fairly stable emotional tendency to respond consistently to some specific object, situation, person or category of people” (Johns 1996, p.131). It’s an invisible, unconscious, and embedded basic feeling that is manifested in the outer visible layer of culture, such as attitudes and practices, and in alternatives of behaviors (Hofstede 1998; De Long and Fahey 2000). The key role of culture in organizations is “creating a consensually validated system of beliefs and values which influences organizational behavior” (Meschi 1994, p.198).

Culture can be applied to different dimensions, such as nations, organizations, age groups, religious groups, and so on. National culture (external culture) and organizational culture (internal culture) are widely accepted as important cultural dimensions for organizations. “Cultural characteristics in a firm, both internal (organizational) and external (national), widely explain the behavior of its employees” (Meschi 1994, p.198). National (external) culture is “national, regional, composed of values, common perceptions, similar views of reality”, while organizational/internal culture is “emerging from group mechanics, relevant in understanding the sub-populations who make up the firm” (Thevenet 1986 in Meschi 1994, p.198). Researchers argue about which of these two dimensions has a dominant influence on organizational behaviors. Proponents of organizational/internal culture suggest that organizational/internal culture affect the possible influences of

national/organizational culture (Meschi 1994), while supporters of national/organizational culture propose that national culture will robustly influence organizational culture. In this body of literature, researchers focus on the knowledge transfer within multinational corporations. That is, researchers focus on knowledge transfer within the same company that cross different national borders and cultures. National culture is believed to “play significant roles in determining the efficacy of such transactions” (Kedia 1988, p.560). Hofstede (1994) provided a model that classified national culture into five dimensions:

- Power distance is “the degree of inequality among people which the population of a country considers a normal: from relatively equal (that is, small power distance to extremely unequal (large power distance);” (p.5)
- Individualism vs. Collectivism where individualism is “the degree to which people in a country prefer to act as individuals rather than as members of groups,” (p.6) while collectivism is the opposite of individualism;
- Uncertainty avoidance is “the degree to which people in a country prefer structured over unstructured situations;” (p.5)
- Masculinity vs. Femininity where masculinity is “the degree to which value like assertiveness, performance, success and competition, which in nearly all societies are associated with the role of men, prevail over values like the quality of life, maintaining warm personal relationships, service, care for the weak, and solidarity, which in nearly all societies are more associated with the role of women” (p.6), while Femininity is the opposite; and

- Long-term orientation is the degree to which people in a country look more for long-term results.

Research questions

This work attempts to answer the following two questions:

- *What are the roles of middle managers in inter-organizational knowledge transfer process?*
- *What is the impact of national culture on the roles of middle managers in inter-organizational knowledge transfer process?*

The organization of the thesis

The organization of this work is as follows: After this introductory chapter, the conceptual framework that is used in this study is followed by a description of the research design and methodology. Chapter 4 contains the data gathered and analyzed. The final chapter presents the conclusion of this work and a discussion of its limitation and implication.

Chapter 2 Conceptual Framework

A multi-stage of Inter-organizational knowledge transfer

“Knowledge transfer is conceptualized as multi-stage process in which knowledge created within one organizational context is re-created and utilized effectively in another” (Abou-Zeid Forthcoming, p.3). Researchers have classified such stages in various ways. Gilbert (1998), for example, identifies five stages of knowledge transfer as knowledge acquisition, communication, application, acceptance, and assimilation. No matter how one defines the model of the inter-organizational knowledge transfer process, there is a common point that the process does not stop with the acquisition of new knowledge but keeps going until the new knowledge is fully integrated into a corporation’s own knowledge pool. In addition, “the steps have to be performed continually as knowledge has dynamic properties and is changing constantly” (Blumentritt 2000, p.38). Abou-Zeid identified the conceptual framework of cross-border knowledge transfer as the following four stages (Abou-Zeid Forthcoming).

The *Initialization* stage “represents the period when the prospective recipient firm becomes aware of the knowledge gap, ... or when the source firm recognizes the knowledge gap and then tries to convince the intended recipient” (Abou-Zeid Forthcoming, p.4). As the first step of the knowledge transfer process, this stage deals with locating and evaluating knowledge sources that are needed to perform certain tasks. This stage what knowledge is important and where such valuable knowledge is available (Abou-Zeid, 2002; De Long, 2000; Blumentritt 2000). This stage “involves activities

such as identifying the type of knowledge to be transferred and evaluating expected outcome and potential source, together with the type of arrangement to be established with the source of required knowledge;” and “the outcome of this stage is the knowledge transfer decision, which includes the selection of the knowledge source and the type of collaborative arrangement” (Abou-Zeid Forthcoming, p.4).

The *Interrelation* stage represents the period when "constructive dialogues begin between the source and recipient firms in order to specify what knowledge is to be transferred, when and to whom, and to identify and solve problems resulting from incompatibility of language, coding schemes and cultural conventions” (Abou-Zeid Forthcoming, p.4). This stage “defines how knowledge and skills are distributed and utilized within organizations” (Abou-Zeid 2002, p.38). With a sound structure of knowledge distribution strategies, right knowledge gets to the right person. Activity in this stage helps knowledge recipients to analyze, to process, to interpret, and to understand new knowledge, which provides a sound base for recipients to assimilate new knowledge, and, thus, to better knowledge transfer. Knowledge is transferred from one unit to another through particular mechanisms. These mechanisms connect the providers and the recipients of knowledge transfer. Without these connections, units would not be able to transfer and share their knowledge with one another. These connections create the potential for units to be exposed to other units’ knowledge and to communicate with others “to share their observations and experiences. Knowledge that connects with other knowledge can be discussed, debated, and possibly discarded” (Bolino n.d., p.6). These connections provide a base for transferring knowledge from providers to recipients and

integrating it into the latter's knowledge pool. Knowledge can be transferred in two main categories which can be both social and non-social. These two categories are marked by formal and informal mechanisms. Formal mechanisms are identified liaison positions, task forces, permanent committees, exchange of personal across divisions; while face-to-face meetings, personal transfer, telephone or in-person conversation, electronic data interchange, teleconferencing, and training seminars and courses are examples of informal mechanisms (Bolino n.d.; Inkpen 1998; Gupta 2000; Lee 2000; Lord 2000; Abou-Zeid Forthcoming).

The *Implementation* stage represents the period “when a ‘transfer coalition’ at the recipient firm, a selected group of the key managers who are in charge of the transfer process, together with the employees who are experts in the domain of transferred knowledge, unpack the newly acquired knowledge, reinterpret what they acquire, and then share tacit knowledge about their observations, including their aspirations and hopes for developing new products and services or improving existing ones” (Abou-Zeid Forthcoming, p.5). In this stage, the acquired knowledge is distributed among the recipient units; and the newly acquired knowledge is applied to unsolved problems and retained inside the units. This stage, however, is not the end of the knowledge transfer process.

The *Internalization* stage represents the period “when the recipient achieves satisfactory results with the transferred knowledge and the use of it gradually becomes routinized” (Abou-Zeid Forthcoming, p.5). This stage is marked by creating and adopting new

knowledge, which is “the process of cumulative learning involving changes in individuals’ abilities and organization’s routines as a direct result of the use of acquired knowledge” (Albino 1999, p.55). The process of knowledge transfer is not finished until the acquired knowledge is institutionalized by recipients and changes their values. “Knowledge ultimately assumes value when it affects decision making and is translated into action” (De Long and Fahey, 2000, p.115).

Roles of middle managers in knowledge transfer process

To answer the first question -- what are the roles of middle managers in inter-organizational knowledge transfer process – the roles of middle managers are examined in each of the four stages in the process of inter-organizational knowledge transfer.

Stage 1 Initialization

As mentioned above, the first stage, the initialization stage, deals with locating and valuating knowledge sources that are needed to perform certain tasks. This stage involves questioning what knowledge is important and where such valuable knowledge is available (Blumentritt 2000; De Long and Fahey 2000; Abou-Zeid 2002). It creates a trigger for knowledge transfer. That is, this stage finds the gap between what is needed to solve problems and what knowledge the organization may contain. Middle managers, who “are usually responsible for translating top management’s goals into action”, “exposure to daily operating problems, such as customer and employee complaints, negotiations with suppliers, tactical moves by competitors, and so on, causes them to be

aware of important technical or marketing trends before such issues surface at the top” (Floyd 1996, p.17). Such awareness provides them with opportunities to find out problems that organizations are facing. Meanwhile, “middle managers are the only people in a position to know the subtle detail about the depth or breadth of capability within the firm” (Floyd 1996, p.18). Thus, “middle managers gain unique insight into what the organization is able to do and what new capabilities need to be developed” (Floyd 1996, p.17), which meets the requirement for transferring newly created knowledge and developing new capabilities. Middle managers are supposed to play the following three roles in this stage.

Radar The first step to establishing the trigger for the knowledge transfer process is to become aware of problems to be solved and the knowledge sources available. By playing this role, middle managers act like radars who discover “risks, opportunities, problems and solutions that were not explicitly linked to the situation” (Janczak n.d., p.8). Although middle managers do not create new knowledge, they can explore their environment and collect external knowledge (Janczak n.d.). By “traveling freely around the company, talking to organizational members across boundaries and levels, they (middle managers) are exposed to a variety of new data, ideas, insights, opportunities, questions, and problems” (Von Krogh et al. 2000, p. 150). By communicating across boundaries and through exposure to different level managers, middle managers can search for information, locate knowledge resources, and generate “knowledge maps (virtual knowledge repositories)” (Janczak n.d., p.8) without clear purpose but for future use. Such knowledge maps build up the foundation for future knowledge transfer and the

creation of new and enhanced organizational capabilities. Without a good foundation, knowledge transfer is only an empty shell with nothing inside. This role is characterized by the following activities:

- Recognizing a knowledge gap,
- Defining possible solutions, and
- Identifying possible knowledge sources.

Filter To discover appropriate problems to be solved and solutions to such problems, knowledge maps have to be filtered to get the proper problem, solution, and corresponding available resources for this solution. Good filters must possess the ability of “thinking in the executive suite” (Floyd 1996, p.35) as well as understanding operating level capabilities. Again, middle managers’ linking position in the knowledge network gives them the possibility to keep both organizational strategy and operational ability in mind. Then, these middle managers can act as filters to discover solutions for problems as well as locate and evaluate available sources. Middle managers filter information from knowledge maps to get what information is important and to whom to get this knowledge. They behave “as collectors of the information, collecting and storing explicit knowledge (i.e. they exploited existing knowledge)” (Janczak n.d., p.6). This role is characterized by two activities:

- Evaluating possible sources for the required knowledge, and
- Suggesting and prioritizing different courses of action to acquire new knowledge.

Champion Floyd and Wooldrige (1996) mentioned that “championing is how middle managers promote strategic initiatives to their supervisors and in the process diversify the

organization's repertoire of capabilities. This role is unique because it centers on a discrete proposal, making it potentially quite visible" (p.54). They defined championing as "the persistent and persuasive communication of proposals that either provide the firm with new capabilities or allow the firm to use existing capabilities differently" (Floyd 1996, p.54). This is the fundamental step "to the innovative deployment of organizational capabilities" (Floyd 1996, p.13). Those who have proposed solutions have to "sell" their proposal to upper managers to initiate the process of knowledge transfer. Failure on such a sale directly stops the process of knowledge transfer. "Working in the organizational zone between strategy and operations, middle managers are uniquely qualified to bring entrepreneurial and innovative proposals to top management's attention" (Floyd 1996, p.42). Thus, this role is played by middle managers in a middle-up way to influence top managers and get their support. Floyd and Wooldridge (1996) pointed out that "middle managers' championing is the centerpiece of a process that allows firms to evolve and remain viable in a continuously changing business environment" and it "places MM at the heart of the firm's regenerative process" (p.54). The role of champion is characterized by the following activities:

- Evaluating the merits of new knowledge transfer proposals, and
- Defining and justifying the importance of new knowledge transfer proposals to upper-level managers.

Stage 2 Interrelation

The second stage provides the structure of knowledge distribution strategies, lets right knowledge get to the right person, and helps knowledge recipients to analyze, process,

interpret, and understand new knowledge. Activity in this stage provides a sound base for recipients to assimilate new knowledge and thus to better knowledge transfer. But such transfer is not just passing knowledge to right person, it is a more complicated activity that includes understanding, respect, and trust among senders and recipients. There are many informal groups within organizations that have various norms, habits, and languages which create obstructions for communication among groups that decrease understanding and trust between one another. As a result, the transfer of knowledge among these groups is inefficient. Middle managers, with their unique opportunity to communicate with various groups, play a vital role in bringing these diverse informal groups together. Specifically, middle managers act as catalysts and coordinators in this stage.

Catalyst Von Krogh et al (2000) defined catalysts as “those who trigger the process and create enabling context of knowledge creation” (p.150). As mentioned above, there are various groups or microcommunities within organizations with their own norms and languages. Bringing these groups together does not necessarily leads to efficient conversation. In addition, “knowledge cannot be separated from its context; it is part of the physical, mental, or virtual place in which it has been created” (Von Krogh et al. 2000, p.4). Thus, “Conversations among group members ... can inhibit people rather than spark them; microcommunities can fall apart, with all the knowledge gained through their personal interactions lost” (Von Krogh et al. 2000, p.150). Middle managers, who communicate with various groups, gain more understanding and trust with those groups. With the help of middle managers who can create a context that can bring various groups

together, those group members will communicate with each other easier and more trustfully. Middle managers facilitate the coming together of different people and various ideas. “This role allows for the exploitation of knowledge that resides in experts in a synergistic way. In addition, catalysts developed a good climate in which employees' creativity can be stimulated. The role of catalyst is characterized by,

- Identifying the different groups, in source and target firms, that are involved in knowledge transfer process, and
- Creating the right context for knowledge sharing among different groups.

Coordinator Coordinators could be defined as those who connect local initiatives. Each individual, group, or department possesses various specialized knowledge needed by an organization. But they are only dispersed nodes along an organizational knowledge network. If they are not connected, the possibility of wasting knowledge resources is high, especially for multinational corporations. Only by connecting all the nodes together can knowledge be transferred within organizations. In turn, organizations can take advantage of valuable knowledge reservoirs. Without these connections, knowledge will only reside within each group wasting the possibility of knowledge transfer. Middle managers, again, with their position superiority to top level and frontline managers, become the best connectors of such a huge knowledge network. They become the centre of the network and let information pass smoothly. Thus, middle managers are positioned to facilitate knowledge use in a most efficient way. Such a role is characterized by,

- Harmonizing differences among the different groups involved in the knowledge transfer process, and
- Enhancing communication and understanding among the different groups involved in the knowledge transfer process.

Stage 3 Implementation

The third stage, Implementation stage, is a stage when “the leap from individual accumulation of knowledge to organizational learning” (Floyd 1996, p.96) takes place. Middle managers has to create situations for the receiving of acquired knowledge, keep solving problems during the absorptions and motivate group members for knowledge sharing.

Facilitator Michalopoulos (2002) defines facilitating “as the process through which middle managers assist into the adoption and implementation of any kind of innovation by helping them pass through the organizational agenda” (p.15). Floyd and Wooldridge (1996) “define the facilitating role as the nurturing and development of experimental programs and organizational arrangements that increase organizational flexibility, encourage organizational learning, and expand the firm’s repertoire of potential strategic responses” (p. 84). To play this role, middle managers should modify newly acquired knowledge according to the condition of recipient firms so that they can easily adopt it. Floyd and Wooldridge (1996) suggested that good facilitators should “provide the appropriate resources for trial projects, a ‘safe’ environment for the implementation of program/projects and relax regulations in order to create a flexible environment for new

programs started” (p.84). Middle managers as facilitators are assumed to (Floyd 1996; Blumentritt 2000),

- Modify required knowledge according to the conditions of recipient, and
- Relax regulations and procedures in order to get new projects started.

Synthesizer Michalopoulos (2002) defines “synthesizing as the process through which any kind of information coming from everywhere inside or outside the organization effectively transmitted everywhere within the organization” (p.18). Nonaka and Takeuchi (1995) mentioned that middle managers “synthesize the tacit knowledge of both front-line employees and senior executives, make it explicit, and incorporate it into new technologies, products, or systems” (p.30), while Floyd and Wooldridge also argued that “MM position between strategy and operations also provides a unique perspective for making sense of the diverse array of information coming from both inside and outside the organization.” According to Floyd and Wooldridge (1996), following activities are suggested for middle managers to be synthesizers (p.148):

- Integrating the newly acquired knowledge with existing knowledge.

Problem solver During the process of receiving newly acquired knowledge, recipients have to absorb new knowledge and adjust the gap between their old knowledge and their new situation. It is a trial and error experimental procedure. Problems continue to emerge. In addition, acquiring new knowledge to solve problems, other problems might bubble up at any time. Thus, a problem solver must know the whole story and solve problems promptly. Middle managers have exactly these required qualities.

Compared with top managers, middle managers have daily contact with frontline managers so that they can solve the problem promptly. Compared with frontline managers, middle managers know the whole picture and stand at a higher point. Middle managers as problem solvers are supposed to have such capacities as:

- Identifying the problems associated with the localization and integration of newly acquired knowledge, and
- Helping involved parties to solve emerging problems.

Stage 4 Internalization

During the last stage, the internalization stage, the newly acquired knowledge is institutionalized by the recipients and embedded into organizational processes and routines. Middle managers play implementer and problem solver roles at this stage. Knowledge transfer does not stop until it brings value to the organization. The institutionalization and routinization of knowledge have to be aligned with the strategic intentions of the organization. Directing institutionalization in daily contacts while keeping the organization's strategic vision in mind, middle managers also play important roles in this stage.

Implementer Floyd and Wooldridge (1996) defined “implementation as a series of interventions designed to align organizational action with strategic intent” (p.96). Implementation involves using newly created capabilities to change previously held systems, structures, daily operations, and adjusting these changes with the organization's strategic intentions. “In essence, it is about redeploying organizational capabilities”

(Floyd 1996, p.100). Middle managers have to “maintain a bird’s eye perspective, soaring beyond the many specific interactions in an organizational to look at the company from above” (Von Krogh et al. 2000, p.170). Again, middle managers, with their ability to communicate with top managers obtain a good grasp of organizational values and occupy the best position to adjust daily operations. Meanwhile, these middle managers know well the difference among groups involved in the process of knowledge transfer through their daily communication with such groups. Being a implementer, as mentioned by Floyd and Wooldridge, middle managers should be (Floyd 1996, p.148),

- Embedding the newly acquired knowledge in organizational processes and routines, and
- Monitoring knowledge institutionalization activities to ensure that they support organization objects.

Problem solver Similarly, a problem solver is also needed for the successful completion of this stage. In this stage, newly acquired knowledge has been integrated into organization’s own knowledge reservoir; new capabilities have been created and are starting to influence the organization’s previously held structures or daily operations. Such institutionalization and routinalization might bring some conflict or problems between strategic intentions and daily operations. Different from the problem solver role in the third stage, problem solvers in this stage stand at a higher vantage point. They must keep a bird’s eye perspective to look at existing problems from the organizational viewpoint instead of the recipients’ viewpoint. Middle managers are needed because such problems and conflicts can happen any time. They are familiar with the organizational

strategy as well as the abilities and demands of each group. That is, they know well of the strategic intentions of the organization as well as the daily operations. Thus, they can find a better solution for the reconciliation of the conflict. Being a problem solver, middle managers should be,

- Communicating with top managers for potential conflicts between new structures or action plans and strategic intentions,
- Communicating with lower managers to find out difficulties for the action of new plans, and
- Preparing for problems or conflicts that might bubble up at anytime.

According to the above discussion, the roles of middle managers in each stage of inter-organizational knowledge transfer are summarized in the following framework Figure 2.1.

		Stages of Inter-Organizational Knowledge Transfer process			
		<i>Initialization</i>	<i>Interrelation</i>	<i>Implementation</i>	<i>Internalization</i>
Roles of middle managers	<i>Radar</i>	X			
	<i>Filter</i>	X			
	<i>Champion</i>	X			
	<i>Catalyst</i>		X		
	<i>Coordinator</i>		X		
	<i>Facilitator</i>			X	
	<i>Synthesizer</i>			X	
	<i>Problem solver</i>			X	X
	<i>Implementer</i>				X

Figure 2.1: Roles of middle managers in IOKT process

Inter-organizational knowledge transfer and national culture

Although some researchers examined middle managers' roles in knowledge transfer processes but still lacked an emphasis on the impact of national culture. However, as shown in considerable amounts of research, national culture is a crucial factor in knowledge transfer (for example, Bolino n.d.; Inkpen 1998; Yoo and Torrey 2002).

Cultures shape the value of both managers and employees. "Cultural differences evoke subtle yet powerfully different managerial behaviors and leadership styles" (Michael 1997, p.83). As a result, middle managers with different cultural backgrounds have different behaviors and leadership styles. Such behaviors and leadership styles provide the organizational context within which employees transfer their knowledge to one another. Thus, in addition to its influence on middle managers' managerial behaviors, national culture also influences employees' expectations and reactions to middle managers' behaviors, which consequently affects employees' willingness to share and transfer knowledge within organizations. Middle managers have to "set the right tone and visibly display their commitment to knowledge transfer initiatives" (Chung 2001, p.5) to enhance the success of knowledge transfer within organizations. Otherwise, they'll bring barriers to efforts of the inter-organizational knowledge transfer process.

As mentioned in Chapter 1, national culture can be classified into five dimensions, which are Power distance, Individualism vs. Collectivism, Uncertainty avoidance, Masculinity vs. Femininity, and Long-term orientation (Hofstede 1984). These dimensions are "programmed early in our lives" (Hofstede 1984, p.4), which determines assumptions and

behaviors of middle managers and all other employees in the process of knowledge transfer. According to several scholars (for example, Hofstede 1984; Vertinsky et al. 1990), power distance and individualism/collectivism are the primary distinctions between North America (Canada and US) and China (Hong Kong and Mainland China). We can see a tremendous difference on these two dimensions of China and North America from Table 2.1. As shown in Table 2.1, on a scale from 0 to 100, Hofstede indicated that, the Power Distance scores of people in Hong Kong and China are much higher than that of people in North America, while the individualism scores of people in Hong Kong and China are much lower than that of people in North America. Thus, power distance and individualism vs. collectivism were chosen as the representatives of national culture in this work and discussed in detail in the following sections.

Table 2.1: Cultural dimension scores* (*Source: Hofstede 1984*)

	Hong Kong	China	North America
Power distance	68	80	40
Individualism	25	20	90

**The higher the score, the greater the level of Power Distance or Individualism*

Power Distance

Power Distance is defined as “the degree of inequality among people which the population of a country considers a normal: from relatively equal (that is, small power distance to extremely unequal (large power distance)” (Hofdtese 1994, p.5). Power distance deals with leaders’ decision power. It “affects both the way in which people organize themselves and the way in which they write about organizing” (Hofdtese 1994,

p.7). Power Distance is the degree to which people accept and expect unequal authority. In countries with a high Power Distance culture, people are more likely to accept unequal authority. That is, they more easily accept the demands and commands from their leaders than people from low Power Distance cultures because “members of high-power-distance cultures expect people in superior positions to be more intelligent than their subordinates and consider involvement of subordinates in decision making to be a sign of poor leadership” (Chow 2001, p.88). On the contrary, “subordinates from low-power-distance cultures consider themselves to have equal rights to their superiors and expect to be consulted on decisions that affect them” (Chow 2001, p.88). The superior position will improve decision power in high-power-distance culture while hard-working, good work and experiences are ways to increase decision power in low-power-distance culture (Hofdtese 1994; Chow 2001; Marchese 2001). Hence, middle managers with different cultural backgrounds might play different roles in the process of inter-organizational knowledge transfer.

Based on the above analysis, people from different Power Distance societies will act differently toward authority: the larger the power distance is, the more people would accept unequal authority. In large power distance society, middle managers would obey and depend more on seniors’ ideas and show more loyalty to their superiors (Yoo and Torrey, 2002, Michael, 1997). Thus, top manager interference would be more favorable in high power distance society to initiate the process of knowledge transfer. That is, middle managers will rely more on their seniors’ directions instead of challenging the whole picture aggressively. As a result, middle managers from high power distance are

assumed to play all the three roles (radar, filter and champion) less than those from low power distance in first stage, the initiation stage.

Similarly, in the last stage, the internalization stage, middle managers in high Power Distance societies are believed to play the two roles (implementer and problem solver) less than those in low Power Distance societies. Middle managers from high Power Distance societies will obey their top managers. Performing the role of implementer and problem solver in this stage, middle managers embed the newly acquired knowledge in organizational processes and routines, monitor knowledge institutionalization activities to ensure that they support organizational objects, as well as communicate with top managers for conflicts between new the structure and strategic intentions. Such activities are firm-wide and deal with organizational objects. These activities are more likely to be performed by higher-level managers than middle managers in high power distance.

In addition to the different roles performed in each stage, middle managers from various cultural settings also act differently even when they perform the same role. In the initiation stage, middle managers locate and value available knowledge sources. Valuation is a subjective human endeavor, and it will be influenced by culture. Cultures shape the definition of what knowledge is relevant and important, and where to get such knowledge. Employees in low Power Distance societies are ready to challenge any contradictory official pronouncement and will seek valuable cues from any resources equal to or underneath their position in the organization. In high Power Distance cultures, juniors highly depend on seniors and take their “cues concerning information, processes

and so forth rather than trust equals to set direction and those under them to provide valuable input” (Yoo and Torrey, 2002, p.20). Thus, in a higher Power Distance society, middle managers are believed to rely more on authoritative sources. On the contrary, middle managers from lower power distance society are assumed to rely more on useful publicly available sources no matter whether such sources are equal or even lower than their position (Yoo and Torrey, 2002).

Individualism vs. collectivism

Individualism is “the degree to which people in a country prefer to act as individuals rather than as members of groups” (Hofdtese 1994, p.6). It “pertains to societies in which everyone is expected to look after himself or herself and his or her immediate family” while the opposite of it, collectivism -- low individualism -- “pertains to societies in which people from birth onwards are integrated into strong, cohesive in-groups” (Hofdtese 1984, pp. 51). In individualistic societies, members have less respect and loyalty to the group they belong to than members of collectivist societies have. They prefer to stand on their own feet, favor independent work, emphasize competition and achieving specific statuses, and have a calculated involvement in group affairs. In contrast, members of collectivist societies respect and remain loyal to their group and emphasize cooperation and group work. They prefer low internal competition, “relationships, harmony, order and discipline” (Vertinsky et al. 1990, p.855) and favor cooperation and teamwork (Vertinsky et al. 1990; Cox 1991; Hofdtese 1994; Chow 2001). In addition, the collectivist orientations “place greater emphasis on the needs and goals of the group, social norms and duty, shared beliefs and cooperation with group members, ...

and are more likely to sacrifice personal interests for the attainment of group goals and are more likely to enjoy doing what the group expects of them” (Cox 1991, p.829).

Cultures shape the norms that define the context for social interaction (De Long and Fahey, 2000). Individualism and collectivism “strongly influence ways of thinking. Specifically, they influence how members of a culture process, interpret, and make use of a body of information and knowledge” (Bhagat et al. 2002, p.206). Collectivists maintain respect, harmony, and loyalty to the groups they belong to and support order, discipline and “centralized authority vested at the top” (Verkasalo et al. 1990, p.829). They are more likely to obey managers’ orders and go along with their managers’ wills. Furthermore, employees in collectivist societies rely on their supervisors while those in individualistic societies prefer to get help from their peers (Yoo and Terrey 2002). In addition, workers in individualist societies envision knowledge creation as an intervention of individual effort while workers in collectivist societies think of the integration and modification of existing knowledge as a group effort (Yoo and Torrey 2002). Hence, middle managers in collectivist societies will more thoroughly create the right context for knowledge sharing among different groups and better harmonize differences among the involved groups.

Chapter 3 Research Design and Methodology

Research design

In order to study the roles of middle managers in inter-organizational knowledge transfer and the impact of national culture on these roles, multiple embedded case studies were used to get a better understanding. According to Yin (2003), there are five major research strategies in the social sciences: experiments, surveys, archival analysis, histories, and case studies (p.16). the criteria for choosing case studies as research methodology should depend on three conditions (Yin 2003, p.1):

- a) The type of research questions: when “how” and “why” questions are posed;
- b) The control an investigator has over actual behavioral events: when investigators have little control over events; and
- c) The focus of the research is on contemporary as opposed to historical phenomena.

Type pf research questions: The two questions examined in this research project were “what are the roles of middle managers in inter-organizational knowledge transfer process” and “what is the impact of national culture on the roles of middle managers in inter-organizational knowledge transfer process.” Although these two questions are “what” questions, they were not about prevalence, but exploratory, which “is a justifiable rationale for conducting an exploratory study, the goal being to develop pertinent hypothesis and propositions for further inquiry” (Yin 2003, p.8). Yin (2003) mentioned that all of the above five research strategies can be used for these kinds of questions.

Extent of control over behavioral events: This criterion distinguished the case study from experiment. Case studies were favored when there was no control over events studied or when relevant behaviors could not be manipulated. As for this work, it studied the roles of middle managers and the impact of national culture on such roles within organizations. The investigator had no control over behavioral events because they were studied within their own context instead of in a laboratory or field setting.

Degree of focus on contemporary as opposed to historical events: As Yin (2003) mentioned, if the study dealt with the “dead” past, the case study was not suitable. Case study strategies were “preferred in examining contemporary events” (Yin, 2003, p.21). This study concerned middle managers who were working in the organizations selected instead of working in the past. It investigated middle managers’ current situation and behavior instead of something that had happened before. As a result, this work met all three of Yin’s criteria so that case study was adopted for this research.

A single-case study might be used to represent a unique or extreme case (Yin 2003). The rationale for using a single-case study, such as a critical case or a typical case, “is suited to an in-depth analysis of complex phenomena as well as the inclusion of multiple data sources in terms of respondents per site, documents, and researcher’s impressions during interviews and tours” (Crossan 2003, p.1093). The single-case study is appropriate for testing, confirming, challenging or extending a well-formulated theory, for representing an extreme or unique case, or for observing and analyzing a phenomenon previously inaccessible (Yin 2003). All of the above three rationales for use of a single-case study

were not satisfied by the needs for this work. On the contrary, it was important for this work to get “compelling and robust” result from the replication procedures of a multi-case study. Thus, a single-case study did not meet the needs for this work and a multi-case study would be used. In addition, this work studied a series of actions, which began with a descriptive theory that represents the phenomena under investigation. Thus, a multiple-descriptive case study was adopted (Yin 1993).

Data collection

In order to compare behaviors of middle managers with different culture backgrounds in the same corporation, three criteria were applied when choosing the research sites. The first one was that the research sites had to be multinational corporations so that the organizations would reach various geographical areas while keeping the same organizational cultures. The second one was that there had to be subsidiaries in both North America and China as selectable research sites because the impact of national cultures on middle managers’ roles was compared between middle managers working in North America (the United States and Canada) and those working in China. The third one was that the selected corporations had to be big enough to have several levels of managers in each subsidiary investigated. Since there is no clear definition of large company, companies among the list of Fortune 500 would be considered as large company. Within those multinational corporations that met all the criteria, research sites were determined based on accessibility to the sites.

The units to be studied were middle managers working in different subsidiaries of selected multinational corporations in either North America or China. To be qualified as candidate informants, these managers had to be those managers who were between top managers and frontline managers. Because of the difficulty in contacting middle managers, those who were willing to participate in the case study were asked to introduce other middle managers to participate. Because of the geographical constraints, middle managers working in these multinational companies were contacted either by person, by telephone or by E-mail based on their convenience and preference.

Documentation, archival records, interviews, direct observation, participant-observation, and physical artifacts are commonly used sources of evidence for case studies. Each source has its own advantages and disadvantages so that no individual source is good enough for a study. Thus, multiple sources of evidence have to be used to ensure triangulation and increase construct validity (Yin 2003). In this work, three sources of evidence were used.

First, the company documents available online: this kind of source was compiled by searching on the company website as well as any other websites providing related information. The purpose of this source was to examine if each research site met all the criteria in the selection.

Second, archival records which included organizational charts, job descriptions and so on: Archival records were provided by middle managers participating in the study. There

were two purposes for collecting this kind of data. One was to examine the qualification of middle managers participating in the study and the other was to provide verification of the data gathered from interviews or questionnaires.

In order to study the behaviors of middle managers in the inter-organizational knowledge transfer process, two types of interviews were adopted. One was a focused interview that “a respondent was interviewed for a short period of time” (Yin 2003, p.90). The conversation was recorded. The other type was a survey which provided certain quantitative data as part of evidence. Given the lack of empirical research on the topic of middle managers’ roles in the process of knowledge transfer, there are no standard well-established research instruments. The questionnaire used in this work was developed by the author based on the theoretical framework presented in Chapter 2. The questionnaire developed was sent to five middle managers working in three multinational organizations other than selected research sites to review. Such questionnaire and the interview identified activities of each middle manager’s roles as well as major differences between the roles of North American middle managers and those of Chinese middle managers. The adoption of either interview or questionnaire depended on the participator’s willingness. A contact letter (Appendix 1) and a consent form (Appendix 2) were sent to those who wished to do the interview, while a contact letter (Appendix 1) and a questionnaire (Appendix 3) were sent to those who only wished to fill in the questionnaire. Middle managers were free to choose filling in questionnaires or doing the interview in either English or Chinese. All middle managers, however, chose to complete the questionnaires or interviews in English.

When questionnaires were filled in or interviews were conducted, a Contact Summary Form (Appendix 4) was used to record each questionnaire or interview. Information gathered included contact types, sites, date of contact, date of record and answers.

To ensure data quality, the data collected from the surveys was triangulated with another source: archival data. The data collected from the surveys was gone over and compared with the content of the job description provided by the participating middle manager. If there was any contradiction between the answers in the questionnaire and job description, such answers with relating questions were sent back to middle managers to confirm their answers. For example, one responsibility of General Sales Manager of Company X was “communicate with account executives (lower manager) to set and communicate monthly goals and budgets and to review monthly goals and budgets”. The first answer of this middle manager to the question “communicating wit lower managers to find out difficulty for the action of new organizational processes and operations” was Not Applicable. Thus, this question was sent back to such manager to review and confirm his answer.

Case study protocol was used to ensure reliability as shown in Figure 3.1.

A. Introduction to the case study and purpose of protocol

A1 Case study questions

- a. What are the roles of middle managers in inter-organizational knowledge transfer process?
- b. What is the impact of national culture on the roles of middle managers in inter-organizational knowledge transfer process?

A2 Theoretical framework

		Stages of Inter-Organizational Knowledge Transfer Process			
		<i>Initialization</i>	<i>Interrelation</i>	<i>Implementation</i>	<i>Internalization</i>
Roles of middle managers	<i>Radar</i>	X			
	<i>Filter</i>	X			
	<i>Champion</i>	X			
	<i>Catalyst</i>		X		
	<i>Coordinator</i>		X		
	<i>Facilitator</i>			X	
	<i>Synthesizer</i>			X	
	<i>Problem solver</i>			X	X
	<i>Implementer</i>				X

B. Data collection procedures

B1 Research sites

B2 Data collection plan

- a. The amount of time to be used for each visit: 1 Hour
-

b. Expected preparation: questionnaire or list of questions

C. Case study questions

C1 What are the roles of middle managers in inter-organizational knowledge transfer process?

C2 What is the impact of national culture on the roles of middle managers in inter-organizational knowledge transfer process?

a. Initialization:

i. Radar

1. Recognizing knowledge gap
2. Defining possible solutions
3. Identifying the possible knowledge sources

ii. Filter

1. Evaluating the possible sources of the required knowledge
2. Suggesting and prioritizing the different courses of action to acquire new knowledge

iii. Champion

1. Evaluating the merits of new knowledge transfer proposals
2. Defining and justifying the importance of new knowledge transfer

iv. Others

b. Interrelation stage?

i. Catalyst

1. Identifying the different groups, in source and target firms, that involved in knowledge transfer process
-

-
- 2. Creating the right context for knowledge sharing among different groups
 - ii. Coordinator
 - 1. Harmonizing differences among the different groups involved in knowledge transfer process
 - 2. Enhancing communication and understanding among the different groups involved in knowledge transfer process
 - iii. Others
 - c. Implementation
 - i. Facilitator
 - 1. Modifying required knowledge according to the conditions of recipient
 - 2. Relaxing regulations and procedures in order to get new projects started
 - ii. Synthesizer
 - 1. Integrating the newly acquired knowledge with existing knowledge
 - iii. Problem solver
 - 1. Identifying the problems associated with the localization and integration of newly acquired knowledge
 - 2. Helping the involved parties in solving the emerging problems
 - iv. Others
 - d. Internalization
 - i. Implementer
 - 1. Embedding the newly acquired knowledge in organizational processes
-

and routines

2. Monitoring knowledge institutionalization activities to ensure that they support organization objects

ii. Problem solver

1. Communicating with top managers for potential conflicts between new structures or action plans and strategic intend
2. Communicating with lower managers to find out difficulty for the action of new plans
3. Preparing for problems or conflicts that might bubble up anytime

iii. Others

Figure 3.1 Case Study Protocol

Data analysis

The answers to the “Yes/No” questions on the questionnaires were gathered together in the Role-ordered Matrix (Table 3.1), and then summarized as a percentage in the Summary of answers (Table 3.2) to prepare for further analysis.

Table 3.1: Role-ordered matrix

			Company name	
			China	North America
Stages	Roles	▪ Activities		
		▪		
		▪		

Table 3.2: Summary of answers

			Company Name		
			Yes	N/A	No
Stages	<i>Roles</i>	▪ Activities			
		▪			
		▪			

In order to analyze the data gathered, the tactics of Counting and Making Contrasts/Comparisons were used to identify the commonalities and differences to each case to increase external validity. As Miles and Huberman (1994) mentioned “by doing the counts, we saw which cases we were wrong about and why this appeared to be the case.” (p.253) Counting was used to verify the behaviors of middle managers in the process of inter-organizational knowledge transfer. In addition, the tactic of Making Contrasts/Comparisons was adopted to find out the differences between Chinese middle managers’ behaviors and those of middle managers in North America.

Furthermore, a replication logic had to be applied to derive information from this case study. The replication logic is different from the sampling logic used in a survey. According to the replication logic, each case is considered and analyzed as an individual case, then cross-experiment analysis is used to find out similarity and difference among the cases (Yin 2003). To apply such logic, each company was analyzed separately, and then the results of these analyzed cases were compared to see if they predicted similar results.

Chapter 4 Data Gathering and Analysis

Research Sites

According to the three criteria mentioned above (multinational corporations, having subsidiaries in both North America and China, and large company), several multinational companies were selected, and the managers in these companies that could be reached were contacted. Those companies with no managers willing to participate in the study were removed from the prospective research site list. Among the remaining companies, only those where at least two managers from China and two from North America agreed to participate were kept as research sites in the study. As a result, two well-known companies were selected as the research sites. For confidentiality, the selected research sites were referred to as Company X and Company Y.

Company X, founded in 1968, is a world-class leader in the distribution and marketing of semiconductors and electro-mechanical components. Company X is a leader in component sales worldwide and was recognized as one of the industry's most innovative organizations all over the world. This company operates from 155 offices in 35 countries in America, Europe, and Asia with more than 6,000 employees. Its broad product line includes memory chips, microcontrollers, passive components, and other electrical components. Its subsidiary sells the items online as well as operates a chain of retail stores.

Company Y, a world leader in fresh dairy products, bottled water, cereal biscuits, and snacks, is a multinational corporation with sales of more than 10 million Euros in 2001, and over 100,000 employees in more than 120 countries. Its core business includes dairy products, beverages, snack crackers, and other packaged goods. Its subsidiaries in North America, which had around 5000 employees and sales of more than 1.5 billion Euros, started in the middle of twenty century and have grown into the leader of fresh dairy products and bottled water. Its Asian subsidiaries were founded in the late 20th century, and have become the leader of bottled water and biscuits with sales of more than 2 billion Euros and over 40,000 employees.

Data collected

Following the data collection procedure mentioned above, six middle managers in Company X agreed to participate in the study; three of whom worked in North America and the other three in China. Their job titles were World Wide Business Manager, World Wide Asset Manager, General Manager, General Sales Manager, and Product Manager (See Appendix 7 - 13 for positions of these titles in the organization and job descriptions). From the organizational charts and job descriptions, these managers had at least 2 subordinates reporting to them as well as at least two levels of upper managers so that all of these managers met the selection criteria. Unfortunately, only the initial contact agreed to do the interview while all participants agreed to fill in the questionnaire. Data collected from this company was as follows:

- Questionnaires filled by 6 middle managers (3 from North America and 3 from China),
- Company information gathered from website, which includes company history and public review, and
- Company information provided by participating middle managers, which includes organizational structure, career mapping, job descriptions, and so on.

Five middle managers of Company Y agreed to participate in this study, three of whom work in North America and other two in China. Their job titles were Product Manager, Brand Manager, Project Release/Quality Manager, Strategic Product Manager, and General Manager. All these managers had at least 2 subordinates reporting to them and had at least two levels of upper managers. Two middle managers were willing to do the interview, and the other three only filled in the questionnaire. Because of the geographical constraints, however, the interview was done online via MSN messenger. Thus, information gathered from this company was as follows:

- Questionnaires filled by 3 middle managers (2 from North America and 1 from China),
- Electronic interview records (1 from North America and 1 from China),
- Company information gathered from website, which is company history, and
- Company information provided by participated middle managers, which includes the organizational structure of the company and their job descriptions.

All the data collected was given a unified file number and listed in Table 4.1.

Table 4.1: List of Source Documents

Company Named	File Name	Source	Location	File Number	Pages
Company X	Company Profile	Websites	China & North America	CX_CP_1	2
Company X	Info on Branch Sales	Organizational Documents	China & North America	CX_OD_1	1
Company X	Info on Product Marketing	Organizational Documents	China & North America	CX_OD_2	1
Company X	WWAM Job Description	Organizational Documents	China & North America	CX_JD_1	1
Company X	WWBM Job Description	Organizational Documents	China & North America	CX_JD_2	1
Company X	PM Job Description	Organizational Documents	China & North America	CX_JD_3	1
Company X	GM Job Description	Organizational Documents	China & North America	CX_JD_4	1
Company X	GSM Job Description	Organizational Documents	China & North America	CX_JD_5	1
Company X	Questionnaire 1	Questionnaire	China	CX_QN_1	3
Company X	Questionnaire 2	Questionnaire	Hong Kong	CX_QN_2	3
Company X	Questionnaire 3	Questionnaire	Canada	CX_QN_3	3
Company X	Questionnaire 4	Questionnaire	Canada	CX_QN_4	3
Company X	Questionnaire 5	Questionnaire	China	CX_QN_5	3
Company X	Questionnaire 6	Questionnaire	Canada	CX_QN_6	3
Company Y	Company Profile	Websites	China & North America	CY_CP_1	2
Company Y	Questionnaire 7	Questionnaire	China	CY_QN_1	3
Company Y	Questionnaire 8	Questionnaire	USA	CY_QN_2	3
Company Y	Questionnaire 9	Questionnaire	USA	CY_QN_3	3
Company Y	Interview Record	MSN (Electronic Interview)	China	CY_IV_1	5
Company Y	Interview Record	MSN (Electronic Interview)	US	CY_IV_2	5

Data analysis

The roles of middle managers in inter-organizational knowledge transfer

The framework, introduced in Chapter 2, identified ten roles that middle managers could play in the different stages of the inter-organizational knowledge transfer process. Each role was described in terms of the activities performed as shown in Table 4.2.

Table 4.2: Middle Managers' Roles and related Activities

Roles	Activities
<i>Radar</i>	▪ Recognizing knowledge gap
	▪ Defining possible solutions
	▪ Identifying the possible knowledge sources
<i>Filter</i>	▪ Evaluating the possible sources of the required knowledge
	▪ Suggesting and prioritizing the different courses of action to acquire new knowledge
<i>Champion</i>	▪ Evaluating the merits of new knowledge transfer proposals
	▪ Defining and justifying the importance of new knowledge transfer proposals to upper-level managers
<i>Catalyst</i>	▪ Identifying the different groups, in source and target firms, that involved in knowledge transfer process
	▪ Creating the right context for knowledge sharing among different groups
<i>Coordinator</i>	▪ Harmonizing differences among the different groups involved in knowledge transfer process
	▪ Enhancing communication and understanding among the different groups involved in knowledge transfer process

<i>Facilitator</i>	▪ Modifying required knowledge according to the conditions of recipient
	▪ Relaxing regulations and procedures in order to get new projects started
<i>Synthesizer</i>	▪ Integrating the newly acquired knowledge with existing knowledge
<i>Problem solver I</i>	▪ Identifying the problems associated with the localization and integration of newly acquired knowledge
	▪ Helping the involved parties in solving the emerging problems
<i>Implementer</i>	▪ Embedding the newly acquired knowledge in organizational processes and routines
	▪ Monitoring knowledge institutionalization activities to ensure that they support organization objects
<i>Problem solver II</i>	▪ Communicating with top managers for potential conflicts between new structures or action plans and strategic intend
	▪ Communicating with lower managers to find out difficulty for the action of new plans
	▪ Preparing for problems or conflicts that might bubble up anytime

All the “Yes/No” questions associated with the above activities, collected from 11 middle managers from the two companies (6 from Company X and 5 from Company Y), were gathered in the following Role-Ordered Matrix (Tables 4.3).

Table 4.3: Role-ordered matrix

(Source: Appendix 14 - 24)

		Company X						Company Y					
		China			North America			China			North America		
Stage 1 Initialization	Radar	Yes	Yes	Yes	Yes	Yes	Yes	N/A	Yes	Yes	Yes	Yes	Yes
		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	N/A	Yes	Yes
		Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Filter	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
		Yes	No	Yes	Yes	Yes	Yes	No	N/A	Yes	Yes	Yes	Yes
Champion	<ul style="list-style-type: none"> ▪ Recognizing knowledge gap ▪ Defining possible solutions ▪ Identifying the possible knowledge sources ▪ Evaluating the possible sources of the required knowledge ▪ Suggesting and prioritizing the different courses of action to acquire new knowledge 	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
		Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	<ul style="list-style-type: none"> ▪ Evaluating the merits of new knowledge transfer proposals ▪ Defining and justifying the importance of new knowledge transfer proposals to upper-level managers 	No	No	Yes	Yes	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes

Stage 2 Interrerlation											
<i>Catalyst</i>	<ul style="list-style-type: none"> Identifying the different groups, in source and target firms, that involved in knowledge transfer process 	Yes	No	Yes	No	Yes	N/A	Yes	N/A	Yes	Yes
	<ul style="list-style-type: none"> Creating the right context for knowledge sharing among different groups 	Yes	N/A	Yes	No	N/A	Yes	N/A	Yes	No	Yes
	<ul style="list-style-type: none"> Harmonizing differences among the different groups involved in knowledge transfer process 	Yes	N/A	Yes	N/A	Yes	N/A	Yes	Yes	No	Yes
	<ul style="list-style-type: none"> Enhancing communication and understanding among the different groups involved in knowledge transfer process 	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<i>Facilitator</i>	<ul style="list-style-type: none"> Modifying required knowledge according to the conditions of recipient 	Yes	N/A	Yes	Yes	Yes	Yes	Yes	Yes	No	N/A
	<ul style="list-style-type: none"> Relaxing regulations and procedures in order to get new projects started 	No	N/A	Yes	Yes	N/A	Yes	No	No	Yes	N/A
	<ul style="list-style-type: none"> Integrating the newly acquired knowledge with existing knowledge 	Yes	N/A	Yes	No	Yes	No	Yes	Yes	Yes	Yes
	<ul style="list-style-type: none"> Identifying the problems associated with the localization and integration of newly acquired knowledge 	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Stage 3 Implementation											
<i>Problem solver I</i>	<ul style="list-style-type: none"> Helping the involved parties in solving the emerging problems 	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Stage 4 Internalization		No	N/A	Yes	No	Yes	Yes	No	Yes	Yes	Yes	Yes	Yes
<i>Implementer</i>	▪ Embedding the newly acquired knowledge in organizational processes and routines	No	N/A	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	▪ Monitoring knowledge institutionalization activities to ensure that they support organization objects	Yes	N/A	Yes	Yes	Yes	Yes	N/A	Yes	Yes	Yes	Yes	Yes
<i>Problem solver II</i>	▪ Communicating with top managers for potential conflicts between new structures or action plans and strategic intend	Yes	N/A	Yes	Yes	Yes	Yes	N/A	Yes	Yes	Yes	Yes	Yes
	▪ Communicating with lower managers to find out difficulty for the action of new plans	Yes	N/A	Yes	Yes	Yes	Yes	N/A	N/A	Yes	Yes	Yes	Yes
	▪ Preparing for problems or conflicts that might bubble up anytime	Yes	N/A	Yes	Yes	Yes	Yes	N/A	N/A	Yes	Yes	Yes	Yes

In order to get clearer comparison of the data, figures in Table 4.3 were extracted further into Summary of answers (Table 4.4). In this table, the answers were counted and presented in percentages. Column A indicates the percentage of “Yes”, “N/A” and “No” answers by managers in Company X. Column B is the percentages for answers by managers in Company Y.

Table 4.4: Summary of answers

		Company X (Column A)			Company Y (Column B)		
		<i>Total: 6</i>			<i>Total: 5</i>		
		Yes	No	N/A	Yes	No	N/A
Radar	▪ Recognizing knowledge gap	100%	0%	0%	80%	0%	20%
	▪ Defining possible solutions	100%	0%	0%	80%	0%	20%
	▪ Identifying the possible knowledge sources	100%	0%	0%	100%	0%	0%
Filter	▪ Evaluating the possible sources of the required knowledge	83%	17%	0%	100%	0%	0%
	▪ Suggesting and prioritizing the different courses of action to acquire new knowledge	83%	17%	0%	60%	20%	20%
Champion	▪ Evaluating the merits of new knowledge transfer proposals	83%	17%	0%	100%	0%	0%
	▪ Defining and justifying the importance of new knowledge transfer proposals to upper-level managers	50%	33%	17%	80%	20%	0%

Stage 2 Interrelation		Stage 3 Implementation						
<i>Catalyst</i>	<i>Coordinator</i>	▪ Identifying the different groups, in source and target firms, that involved in knowledge transfer process	50%	33%	17%	80%	0%	20%
		▪ Creating the right context for knowledge sharing among different groups	50%	17%	33%	60%	20%	20%
		▪ Harmonizing differences among the different groups involved in knowledge transfer process	50%	0%	50%	60%	20%	20%
		▪ Enhancing communication and understanding among the different groups involved in knowledge transfer process	100%	0%	0%	100%	0%	0%
<i>Facilitator</i>		▪ Modifying required knowledge according to the conditions of recipient	83%	0%	17%	60%	20%	20%
		▪ Relaxing regulations and procedures in order to get new projects started	33%	17%	50%	20%	60%	20%
		▪ Integrating the newly acquired knowledge with existing knowledge	50%	33%	17%	80%	20%	0%
		▪ Identifying the problems associated with the localization and integration of newly acquired knowledge	100%	0%	0%	100%	0%	0%
<i>Problem solver I</i>		▪ Helping the involved parties in solving the emerging problems	100%	0%	0%	100%	0%	0%

Stage 4 Internalization								
<i>Implementer</i>	▪ Embedding the newly acquired knowledge in organizational processes and routines	50%	33%	17%	80%	20%	0%	
	▪ Monitoring knowledge institutionalization activities to ensure that they support organization objects	67%	0%	33%	100%	0%	0%	
	▪ Communicating with top managers for potential conflicts between new structures or action plans and strategic intend	67%	0%	33%	80%	0%	20%	
<i>Problem solver II</i>	▪ Communicating with lower managers to find out difficulty for the action of new plans	50%	0%	50%	80%	0%	20%	
	▪ Preparing for problems or conflicts that might bubble up anytime	50%	0%	50%	100%	0%	0%	

Company X

Since the aim of this work was to investigate the roles of middle managers and their involvement in each role; “Yes” answers were the only answers that were considered. Table 4.5 summarized the percentage of “Yes” answers by middle managers in Company X based on figures in Column A of Table 4.4.

Table 4.5: Summary of “Yes” answers (Company X)

		Company X (Total: 6)
Radar	▪ Recognizing knowledge gap	100%
	▪ Defining possible solutions	100%
	▪ Identifying the possible knowledge sources	100%
Filter	▪ Evaluating the possible sources of the required knowledge	83%
	▪ Suggesting and prioritizing the different courses of action to acquire new knowledge	83%
Champion	▪ Evaluating the merits of new knowledge transfer proposals	83%
	▪ Defining and justifying the importance of new knowledge transfer proposals to upper-level managers	50%
Catalyst	▪ Identifying the different groups, in source and target firms, that involved in knowledge transfer process	50%
	▪ Creating the right context for knowledge sharing among different groups	50%
Coordinator	▪ Harmonizing differences among the different groups involved in knowledge transfer process	50%

	<ul style="list-style-type: none"> ▪ Enhancing communication and understanding among the different groups involved in knowledge transfer process 	100%
Facilitator	<ul style="list-style-type: none"> ▪ Modifying required knowledge according to the conditions of recipient 	83%
	<ul style="list-style-type: none"> ▪ Relaxing regulations and procedures in order to get new projects started 	33%
Synthesizer	<ul style="list-style-type: none"> ▪ Integrating the newly acquired knowledge with existing knowledge 	50%
Problem solver I	<ul style="list-style-type: none"> ▪ Identifying the problems associated with the localization and integration of newly acquired knowledge 	100%
	<ul style="list-style-type: none"> ▪ Helping the involved parties in solving the emerging problems 	100%
Implementer	<ul style="list-style-type: none"> ▪ Embedding the newly acquired knowledge in organizational processes and routines 	50%
	<ul style="list-style-type: none"> ▪ Monitoring knowledge institutionalization activities to ensure that they support organization objects 	67%
Problem solver II	<ul style="list-style-type: none"> ▪ Communicating with top managers for potential conflicts between new structures or action plans and strategic intend 	67%
	<ul style="list-style-type: none"> ▪ Communicating with lower managers to find out difficulty for the action of new plans 	50%
	<ul style="list-style-type: none"> ▪ Preparing for problems or conflicts that might bubble up anytime 	50%

The very low percentage of “Yes” answers with regard to the second activity describing the facilitators role – “Relaxing regulations and procedures in order to get new projects

started” -- suggests that this activity was not a proper activity for describing the role of middle managers as facilitators.

In order to assess the degree to which middle managers were involved in each role, a Role Involvement Index, was defined as follow:

$$\text{Role Involvement Index (RII)} = \sum_{i=1}^N (\text{Percentage of "Yes" answers}) / N$$

where N was the number of activities describing a specific role. Table (4.6) shows RII for the ten roles of middle managers in Company X.

Table 4.6: Role Involvement Index (Company X)

	Role	RII
1	<i>Problem solver I</i>	100%
	<i>Radar</i>	100%
2	<i>Filter</i>	83%
	<i>Facilitator</i>	83%
3	<i>Coordinator</i>	75%
4	<i>Champion</i>	67%
5	<i>Implementer</i>	59%
6	<i>Problem solver II</i>	56%
7	<i>Catalyst</i>	50%
	<i>Synthesizer</i>	50%

To get a clear view of the above information, information in Table 4.6 was expressed in a graphical way as shown in Figure 4.4. The roles with highest RII in Company X were the

role of Radar and Problem Solver I, while those with lowest RII were Catalyst and Synthesizer.

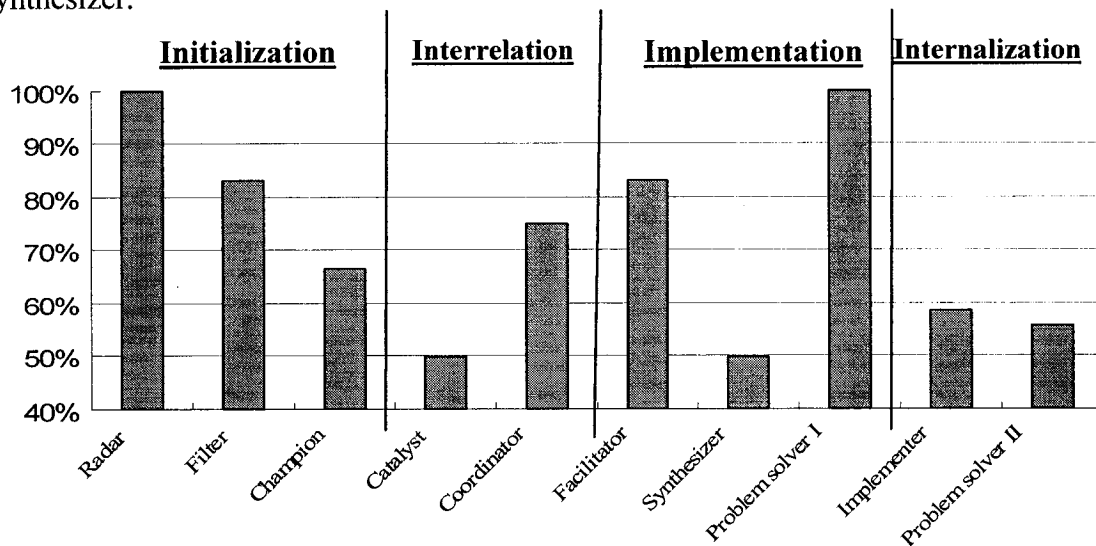


Figure 4.4: Role Involvement Index in graph (Company X)

Initialization

- Radar: all middle managers in Company X answered “Yes”, which made the RII of this role to 100%.
- Filter: The RII for the Filter role was 83%. Both of the two activities suggested to this role got 83% of middle managers’ “Yes” answers separately.
- Champion: the RII was only 67%. This lower rate compared with the first two roles in this stage can be attributed to the low involvement on the second activity for this role “Defining and justifying the importance of new knowledge transfer proposals to upper-level managers.” Only 50% of the middle managers gave positive answers to this activity, while 83% middle managers gave “Yes” answers to the first activity “Evaluating the merits of new knowledge transfer proposals.”

- In addition to each activity of the three roles, middle managers were asked to give priority to eight sources which included upper managers, peers, lower managers, publicly available sources (newspaper, radio, magazines, and etc.), authorities, relatives, and friends, given that each source provided same knowledge. The scores collected from Company X for each source of knowledge were listed in Table 4.7 as well as the average rating of the middle managers' priorities given for each knowledge source. The lower the number given in the scale, the higher the priority. Some sources were ignored by some middle managers. These sources, which were not chosen as sources for knowledge, were all given a rating of 8 to calculate the average.

Table 4.7: Priorities to Sources of knowledge (Company X)

Sources		Upper managers	Peers	Lower managers	Competitors	Publicly available sources	Authorities	Relatives	Friends
Company X	China	1	6	4	5	3	2	7	8
		3	4	8	8	1	8	8	2
		8	5	7	6	1	2	4	3
	North America	2	3	4	8	1	7	6	5
		8	1	8	8	3	8	8	2
		2	3	4	8	1	7	6	5
		Average of managers in Company X		4.0	3.7	5.8	7.2	1.7	5.7

Overall, publicly available sources, peers, and upper managers were the top three knowledge sources with the lowest scores, while competitors and relatives were the two sources with highest scores.

Interrelation

- Catalyst: The RII of the role as Catalyst was low with 50% “Yes” responses. For the two activities suggested for this role, 50% of the middle managers gave positive answers.
- Coordinator: The RII was a little bit higher at 75% for this role. Only 50% of the middle managers gave “Yes” responses to the first activity “Harmonizing differences among the different groups involved in knowledge transfer process,” while all of the middle managers gave “Yes” responses to the second activity “Enhancing communication and understanding among the different groups involved in knowledge transfer process.”

Implementation

- Facilitator: Two activities were suggested for this role. 83% of the middle managers gave “Yes” responses to the first activity “Modifying required knowledge according to the conditions of recipients,” while only 33% of the middle managers gave positive answers to the second activity “Relaxing regulations and procedures in order to get new projects started.” Such a low percentage of “Yes” answers regarding the second activity suggested that this activity was not a proper descriptor of the Facilitator role.

- Synthesizer: Only one activity was suggested for this role, which was “Integrating the newly acquired knowledge with existing knowledge.” 50% of the middle managers gave “Yes” responses to this activity.
- Problem Solver I: All of the middle managers gave “Yes” responses to the two activities suggested for this role, which gave the role of Problem Solver I the highest RII percentage of 100%.

Internalization

- Implementer: The RII for this role was low at 59%. Only 50% of the middle managers gave “Yes” responses to the first activity “Embedding the newly acquired knowledge in organizational processes and routines” suggested for this role, while 67% gave “Yes” responses to the second activity “Monitoring knowledge institutionalization activities to ensure that they support organization objects.”
- Problem Solver II: The RII for this role was even lower 56%. Three activities were suggested. 67% of the middle managers gave “Yes” responses to the activity “Communicating with top managers for potential conflicts between new structures or action plans and strategic intend.” Only 50% of the middle managers gave positive answers to the activity “Preparing for problems or conflicts that might bubble up anytime” as well as to the activity “Communicating with lower managers to find out difficulty for the action of new plans.”

Company Y To apply the replication logic as well as increase the external validity, the same analysis technique used for Company X was used to analyze the

responses given by managers in Company Y. The percentage of “Yes” answers given by middle managers in Company Y for each role and their related activities were summarized in Table 4.8 based on figures in Column B of Table 4.4.

Table 4.8: Summary of “Yes” answers (Company Y)

		Company Y (Total: 5)
Radar	▪ Recognizing knowledge gap	80%
	▪ Defining possible solutions	80%
	▪ Identifying the possible knowledge sources	100%
Filter	▪ Evaluating the possible sources of the required knowledge	100%
	▪ Suggesting and prioritizing the different courses of action to acquire new knowledge	60%
Champion	▪ Evaluating the merits of new knowledge transfer proposals	100%
	▪ Defining and justifying the importance of new knowledge transfer proposals to upper-level managers	80%
Catalyst	▪ Identifying the different groups, in source and target firms, that involved in knowledge transfer process	80%
	▪ Creating the right context for knowledge sharing among different groups	60%
Coordinator	▪ Harmonizing differences among the different groups involved in knowledge transfer process	60%
	▪ Enhancing communication and understanding among the different groups involved in knowledge transfer process	100%
Facilitator	▪ Modifying required knowledge according to the conditions of recipient	60%
	▪ Relaxing regulations and procedures in order to get new projects started	20%

Synthesizer	<ul style="list-style-type: none"> Integrating the newly acquired knowledge with existing knowledge 	80%
Problem solver I	<ul style="list-style-type: none"> Identifying the problems associated with the localization and integration of newly acquired knowledge 	100%
	<ul style="list-style-type: none"> Helping the involved parties in solving the emerging problems 	100%
Implementer	<ul style="list-style-type: none"> Embedding the newly acquired knowledge in organizational processes and routines 	80%
	<ul style="list-style-type: none"> Monitoring knowledge institutionalization activities to ensure that they support organization objects 	100%
Problem solver II	<ul style="list-style-type: none"> Communicating with top managers for potential conflicts between new structures or action plans and strategic intend 	80%
	<ul style="list-style-type: none"> Communicating with lower managers to find out difficulty for the action of new plans 	80%
	<ul style="list-style-type: none"> Preparing for problems or conflicts that might bubble up anytime 	100%

The percentage of “Yes” answers regarding the second activity describing the

Facilitator role – “Relaxing regulations and procedures in order to get new projects started” – was also very low, which suggested that this activity was not a proper descriptor for the Facilitator role.

Using the same techniques for analysis, the Role Involvement Index for the ten middle manager roles in Company Y was calculated in the following table (Table 4.9).

Table 4.9: Role Involvement Index (Company Y)

	Role	RII
<i>1</i>	<i>Problem solver I</i>	100%
<i>2</i>	<i>Implementer</i>	90%
	<i>Champion</i>	90%
<i>3</i>	<i>Problem solver II</i>	87%
	<i>Radar</i>	87%
<i>4</i>	<i>Synthesizer</i>	80%
	<i>Filter</i>	80%
	<i>Coordinator</i>	80%
<i>5</i>	<i>Catalyst</i>	70%
<i>6</i>	<i>Facilitator</i>	60%

To get a clear view of the above information, the percentages in Table 4.9 were expressed in a graphical way as shown in Figure 4.5. The roles with highest RII in Company Y were the role of Problem Solver I, while those with lowest RII were the Catalyst and Facilitator roles.

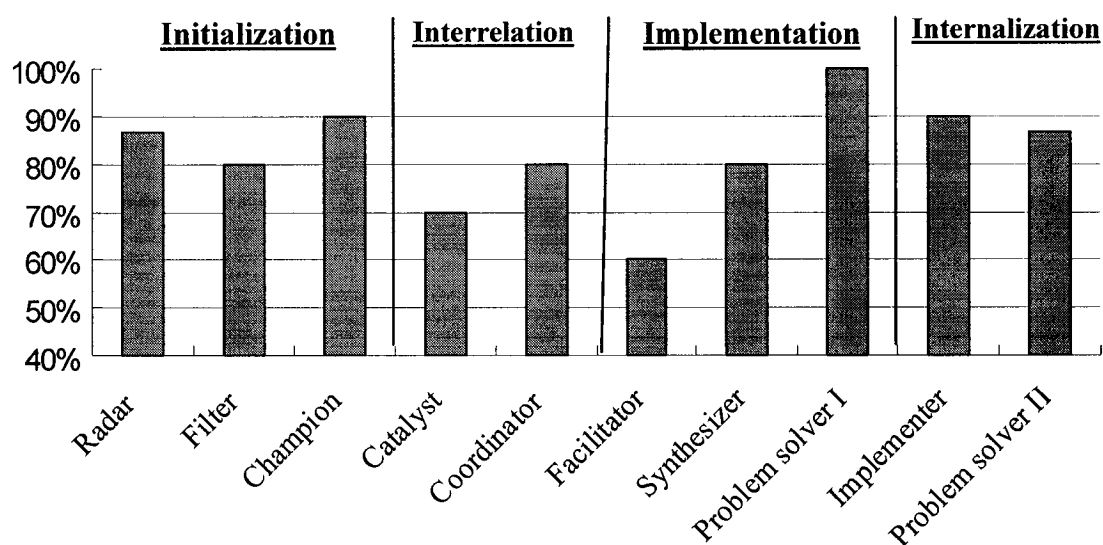


Figure 4.5: Role Involvement Index in graph (Company Y)

Initialization

The Role Involvement Index for the three roles in this stage was high.

- Rader: all except one Chinese middle manager and one manager from North America gave “Yes” responses to all three activities of this role, which made the RII for this role 87%. Middle manager B in China used his own experiences on “Recognizing knowledge gaps,” “Defining possible solutions,” and “Identifying the possible knowledge sources” as examples confirming this role in the knowledge transfer process. Manager C, who worked in the United States, mentioned that “Recognizing knowledge gap” was his work on a daily basis.
- Filter: All middle managers gave “Yes” responses to the first activity “Evaluating the possible sources of the required knowledge,” while only 60% gave “Yes” responses to the activity “Suggesting and prioritizing the different courses of action to acquire new knowledge.”
- Champion: the RII was as high at 90%. All middle managers in Company Y gave “Yes” to the first activity “Evaluating the merits of new knowledge transfer proposals,” while 80% of the middle managers gave positive answers to the second activity “Defining and justifying the importance of new knowledge transfer proposals to upper-level managers.”
- Given that each source provided the same knowledge required, the middle managers were asked to give priority to eight sources which included upper managers, peers, lower managers, publicly available sources (newspaper, radio, magazines, and etc.), authorities, relatives, and friends. The scores collected from Company Y for each source of knowledge as well as the average rating of the middle managers’ priorities

given for each knowledge source were gathered in Table 4.10. The lower the number given in the scale, the higher the priority. Those sources which were not chosen as sources for knowledge were all given a rating of 8 to calculate the average.

Table 4.10: Priorities to Sources of knowledge (Company Y)

Sources		Upper managers	Peers	Lower managers	Competitors	Publicly available sources	Authorities	Relatives	Friends
Company Y	China	3	4	5	6	2	1	8	7
		5	3	7	6	2	1	8	4
	North America	5	1	2	4	3	6	8	8
		1	2	8	5	6	4	8	3
		8	1	2	7	5	4	6	3
		Average of managers in Company Y		4.4	2.2	4.8	5.6	3.6	3.2

Overall, peers, authorities, and publicly available sources were the three sources with lowest scores and thus the most priority, while relatives, competitors, and friends were given the highest scores.

Interrelation

- Catalyst: The RII of this role was 70%. The percentages of “Yes” answers for the two activities suggested for this role was 80% for “Identifying the different groups, in source and target firms that involved in knowledge transfer process” and 60% for

“Creating the right context for knowledge sharing among different groups.” Manager B marked “Not Applicable” and mentioned that, “Some professional peers may handle/coordinate these (I) just suggest where to get it, and not really identify who will get it. The boss may take care of the followings (I do these) unless my subordinates are recipients.”

- Coordinator: The RII of this role was a little higher than that of Catalyst in Company Y, which was 80%. 60% of the middle managers gave “Yes” responses to the first activity “Harmonizing differences among the different groups involved in knowledge transfer process,” while 100% of the middle managers gave “Yes” responses to the second activity “Enhancing communication and understanding among the different groups involved in knowledge transfer process.” The US manager, manager B, mentioned this as a necessary step in the knowledge transfer process.

Implementation

- Facilitator: 60% of the middle managers gave “Yes” responses to the first activity “Modifying required knowledge according to the conditions of recipients” of this role while only 20% of the middle managers were positive to the second activity “Relaxing regulations and procedures in order to get new projects started.” Such a low percentage of “Yes” answers regarding the second activity suggested that this activity is not a proper descriptor of the role as Facilitators.
- Synthesizer: 80% of the middle managers gave “Yes” responses to the only activity “Integrating the newly acquired knowledge with existing knowledge” suggested for this role.

- Problem Solver I: All middle managers gave “Yes” answers to all of the activities suggested for this role. Hence, the Role Involvement Index of this role as Problem Solver I was 100%.

Internalization

There were two roles for this stage. The Role Involvement Index for these two roles was for

- Implementer: The RII for this role was 87%. For the two activities suggested for this role, 80% of the middle managers gave “Yes” responses to the first activity “Embedding the newly acquired knowledge in organizational processes and routines,” while 100% gave “Yes” responses to the second activity “Monitoring knowledge institutionalization activities to ensure that they support organization objects.”
- Problem Solver II: The RII of this role was high at 90%. Three activities were suggested for this role. 80% middle managers gave “Yes” responses to the activity “Communicating with top managers for potential conflicts between new structures or action plans and strategic intend.” 80% responded positively to the activity “Preparing for problems or conflicts that might bubble up anytime,” and 100% of the middle managers responded positively to the activity “Communicating with lower managers to find out difficulty for the action of new plans.”

The impact of national culture on middle managers’ roles

Company X

In order to analyze the impact of national culture, original answers collected from Company X as shown in Table 4.3 (Role-ordered matrix) were extracted further into the Role-Ordered Matrix classified by Culture (Company X) (Table 4.11). In

this table, the “Yes” answers were counted, grouped based on geographical area, and presented as percentages. These percentages indicate the percentage of “Yes” answers for the total number of answers from middle managers in Company X.

Table 4.11: Role-Ordered Matrix classified by Culture (Company X)

			Company X	
			China	North America
Stage 1 Initialization	<i>Radar</i>	▪ Recognizing knowledge gap	100%	100%
		▪ Defining possible solutions	100%	100%
		▪ Identifying the possible knowledge sources	100%	100%
	<i>Filter</i>	▪ Evaluating the possible sources of the required knowledge	67%	100%
		▪ Suggesting and prioritizing the different courses of action to acquire new knowledge	67%	100%
	<i>Champion</i>	▪ Evaluating the merits of new knowledge transfer proposals	67%	100%
		▪ Defining and justifying the importance of new knowledge transfer proposals to upper-level managers	33%	67%
Stage 2 Interrelation	<i>Catalyst</i>	▪ Identifying the different groups, in source and target firms, that involved in knowledge transfer process	67%	33%
		▪ Creating the right context for knowledge sharing among different groups	67%	33%
	<i>Coordinator</i>	▪ Harmonizing differences among the different groups involved in knowledge transfer process	67%	33%
		▪ Enhancing communication and understanding among the different groups involved in knowledge transfer process	100%	100%

Stage 3 Implementation	Facilitator	▪ Modifying required knowledge according to the conditions of recipient	67%	100%
	Synthesizer	▪ Integrating the newly acquired knowledge with existing knowledge	67%	33%
	Problem solver I	▪ Identifying the problems associated with the localization and integration of newly acquired knowledge	100%	100%
		▪ Helping the involved parties in solving the emerging problems	100%	100%
Stage 4 Internalization	Implementer	▪ Embedding the newly acquired knowledge in organizational processes and routines	33%	67%
		▪ Monitoring knowledge institutionalization activities to ensure that they support organization objects	67%	67%
	Problem solver II	▪ Communicating with top managers for potential conflicts between new structures or action plans and strategic intend	67%	67%
		▪ Communicating with lower managers to find out difficulty for the action of new plans	67%	33%
		▪ Preparing for problems or conflicts that might bubble up anytime	67%	33%

According to the information provided by middle managers, the career mapping and job description were the same in all subsidiaries all over the world. Thus, we could consider that subsidiaries within the same company are organized similarly while being located in a different national and cultural context.

Initialization There was no difference between middle managers in Company X from the two areas for the first role as Radar. There was a major difference on the second (Filters) and third (Champion) roles. the percentage of “Yes” answers for these two roles

was lower for Chinese middle managers than for middle managers from North America. This finding was consistent with previous theories as mentioned in Chapter 2 that middle managers from high power distance (China) are assumed to play these roles less than those from low power distance (North America).

Priority for each source of knowledge, given that each source provided the same knowledge required, was extracted from Table 4.7, grouped by geographical area and an average was calculated for each location in Table 4.12. The lower the number given in the scale, the higher the priority. Those sources which were not chosen as sources for knowledge were all given a rating of 8 to calculate the average.

Table 4.12: Priorities to Sources of knowledge classified by Culture (Company X)

Sources	Upper managers	Peers	Lower managers	Competitors	Publicly available sources	Authorities	Relatives	Friends
China	1	6	4	5	3	2	7	8
	3	4	8	8	1	8	8	2
	8	5	7	6	1	2	4	3
Average of priority of Chinese middle managers	4.0	5.0	6.3	6.3	1.7	4.0	6.3	4.3
North America	2	3	4	8	1	7	6	5
	8	1	8	8	3	8	8	2
	2	3	4	8	1	7	6	5
Average of priority of middle managers in North America	4.0	2.3	5.3	8.0	1.7	7.3	6.7	4.0

Sources with lowest scores were publicly available sources for Chinese middle managers, while publicly available sources and peers were those with lowest scores for middle managers in North America. Lower managers, competitors, and relatives received the highest scores for Chinese middle managers, while competitors, authorities, and relatives were those with highest scores for middle managers in North America. There was little difference between the scores for upper managers and friends between middle managers in both locations.

Interrelation In this stage, 67% of the Chinese middle managers gave “Yes” responses to all of the activities suggested for the Catalyst role as well as to the first activity suggested for the Coordinator role. Only 33% of the middle managers in North America, however, gave positive answers to these activities. There was no difference reported for the second activity “Enhancing communication and understanding among the different groups involved in knowledge transfer process” between middle managers from the two areas investigated. All marked “Yes” to this activity.

Implementation The difference between Chinese middle managers and middle managers from North America was reported mainly on the first (Facilitator) and second (Synthesizer) roles.

- Facilitator: 67% of the Chinese middle managers gave “Yes” responses to this role while all middle managers in North America gave “Yes” responses.
- Synthesizer: 67% of the Chinese middle managers gave positive answers to this role. Only 33% middle managers in North America, however, marked “Yes”.

- There was no difference between middle managers in Company X on the third role of Problem Solver I. All middle managers gave “Yes” answers to all of the activities suggested for this role.

Internalization Several differences were found in the last stage.

- Implementer: Only 33% of the Chinese middle managers gave positive answers to the two activities suggested for this role, while 67% of the North American middle managers said “Yes”.
- Problem Solver II: There was no difference on the first activity “Communicating with top managers for potential conflicts between new structures or action plans and strategic intent.” Differences were found for the last two activities for this role. 67% of the Chinese middle managers gave “Yes” responses to the last two activities, which were “Communicating with lower managers to find out difficulty for the action of new plans” and “Preparing for problems or conflicts that might bubble up anytime.” Only 33% of the North American middle managers, however, gave positive responses to these two activities.

Company Y Again, to apply replication logic and to improve external validity, the same technique used to analyze Company X was also used to analyze Company Y. Therefore, original answers collected from Company Y as shown in Table 4.3 (Role-ordered matrix) were extracted further into Role-Ordered Matrix classified by Culture (Company Y) (Table 4.13). The “Yes” answers of middle managers in Company B were counted, grouped based on geographical area, and presented as percentages. These

percentages indicate the percentage of “Yes” answers for the total number of answers from middle managers in Company Y.

Table 4.13: Role-Ordered Matrix classified by Culture (Company Y)

			Company Y	
			China	North America
Stage 1 Initialization	<i>Radar</i>	▪ Recognizing knowledge gap	50%	100%
		▪ Defining possible solutions	100%	67%
		▪ Identifying the possible knowledge sources	100%	100%
	<i>Filter</i>	▪ Evaluating the possible sources of the required knowledge	100%	100%
		▪ Suggesting and prioritizing the different courses of action to acquire new knowledge	0%	100%
	<i>Champion</i>	▪ Evaluating the merits of new knowledge transfer proposals	100%	100%
		▪ Defining and justifying the importance of new knowledge transfer proposals to upper-level managers	50%	100%
Stage 2 Interrelation	<i>Catalyst</i>	▪ Identifying the different groups, in source and target firms, that involved in knowledge transfer process	50%	100%
		▪ Creating the right context for knowledge sharing among different groups	50%	67%
	<i>Coordinator</i>	▪ Harmonizing differences among the different groups involved in knowledge transfer process	50%	67%
		▪ Enhancing communication and understanding among the different groups involved in knowledge transfer process	100%	100%
Implementatio	<i>Facilitator</i>	▪ Modifying required knowledge according to the conditions of recipient	100%	33%

Stage 4 Internalization			0%	33%
	<i>Synthesizer</i>	<ul style="list-style-type: none"> Integrating the newly acquired knowledge with existing knowledge 	50%	100%
	<i>Problem solver I</i>	<ul style="list-style-type: none"> Identifying the problems associated with the localization and integration of newly acquired knowledge 	100%	100%
		<ul style="list-style-type: none"> Helping the involved parties in solving the emerging problems 	100%	100%
	<i>Implementer</i>	<ul style="list-style-type: none"> Embedding the newly acquired knowledge in organizational processes and routines 	50%	100%
		<ul style="list-style-type: none"> Monitoring knowledge institutionalization activities to ensure that they support organization objects 	100%	100%
	<i>Problem solver II</i>	<ul style="list-style-type: none"> Communicating with top managers for potential conflicts between new structures or action plans and strategic intend 	50%	100%
		<ul style="list-style-type: none"> Communicating with lower managers to find out difficulty for the action of new plans 	50%	100%
		<ul style="list-style-type: none"> Preparing for problems or conflicts that might bubble up anytime 	100%	100%

According to the information provided by middle managers in company Y, the career mapping and job descriptions were also the same in all subsidiaries all over the world. Thus, we could consider that subsidiaries within the same company were organized similarly while located in a different national and cultural context.

Initialization There was some difference between middle managers from the two areas regarding all three roles in this stage.

- Radar: Differences were found on the first and second activities.

- 50% of the Chinese middle managers gave “Yes” responses to the activity “Recognizing knowledge gap,” while 100% of the middle managers from North America marked “Yes” to this activity. These responses indicate that Chinese middle managers were involved in the first activity “Recognizing knowledge gap” less than middle managers from North America, which was consistent with what was mentioned in Chapter 2 that Chinese middle managers, who were with high power distance, were assumed to play this role less.
- The results for the second activity “Defining possible solutions” exhibited contrary data to the first activity. That is, all Chinese middle managers gave “Yes” responses to this activity, while 67% of the middle managers from North America gave “Yes” responses.
- Filter: There was no difference on the first activity of this role. That was, all middle managers gave “Yes” responses to the first activity “Evaluating the possible sources of the required knowledge.” A large difference was found on the second activity “Suggesting and prioritizing the different courses of action to acquire new knowledge.” None of the Chinese middle managers gave positive answers to this activity, while all middle managers in North America did so.
- Champion: All of the middle managers gave “Yes” responses to the activity “Evaluating the merits of new knowledge transfer proposals.” There was, however, a difference on the second activity “Defining and justifying the importance of new knowledge transfer proposals to upper-managers.” 50% of the Chinese middle managers marked “Yes” to this activity, while 100% of the North American middle managers said “Yes”.

- The average of the middle managers' priorities for available sources was also calculated as had been done to analyze Company X. Priority for each source of knowledge, given that each source provided the same knowledge required, was extracted from Table 4.10, grouped by geographical area and an average was calculated for each location in Table 4.14. The lower the number given in the scale, the higher the priority.

Table 4.14: Priorities to Sources of knowledge classified by Culture (Company Y)

Sources	Upper managers	Peers	Lower managers	Competitors	Publicly available sources	Authorities	Relatives	Friends
China	3	4	5	6	2	1	8	7
	5	3	7	6	2	1	8	4
Average of priority of Chinese middle managers	4.0	3.5	6.0	6.0	2.0	1.0	8.0	5.5
North America	5	1	2	4	3	6	8	8
	1	2	8	5	6	4	8	3
	8	1	2	7	5	4	6	3
Average of priority of middle managers in North America	4.7	1.3	4.0	5.3	4.7	4.7	7.3	4.7

Sources with the lowest scores were authorities and publicly available sources for Chinese middle managers, while peers received the lowest scores for middle managers in North America. Lower managers, competitors, and relatives were those with the highest scores for Chinese middle managers, while competitors and relatives were those with

highest scores for middle managers in North America. There was little difference between the scores for upper managers and friends between middle managers in both locations.

Interrelation

- Catalyst: the percentage of Chinese middle managers' "Yes" answers was lower than that of middle managers in North America. , while all middle managers from North America gave positive answers to the first activity of the role of Catalyst and 67% to the second activity.
- Coordinator: The percentage of Chinese middle managers' "Yes" answers to the first activity of this role was 50% while that was 67% for middle managers from North America. There was no difference on the second activity "Enhancing communication and understanding among the different groups involved in knowledge transfer process" between middle managers from the two areas investigated. All marked "Yes" to this activity.

Implementation Differences between Chinese middle managers and middle managers from North America in this stage occurred mainly on the first and second roles.

- Facilitator: all Chinese middle managers gave "Yes" responses to this role, while only 33% middle managers in North America gave "Yes" responses.
- Synthesizer: 50% of the Chinese middle managers gave positive answers, while all middle managers in North America marked "Yes" for this role.

- Problem Solver I: There was no difference between middle managers in Company Y on the third role. All middle managers gave “Yes” responses to all of the activities suggested for this role.

Internalization Several differences were found during this stage.

- Implementer: 50% of the Chinese middle managers gave positive answers to the activity “Embedding the newly acquired knowledge in organizational processes and routines,” while all middle managers in North America said “Yes”. There was no difference on the second activity of the role as implementer because all middle managers gave “Yes” responses.
- Problem Solver II: The percentage of “Yes” answers from Chinese middle managers to the first activity “Communicating with top managers for potential conflicts between new structures or action plans and strategic intent” and the second activity “communicating with lower managers to find out difficulty for the action of new plans” were the same at 50%. All middle managers in North America, however, marked “Yes” to these two activities. There was no difference on the last activity “Preparing for problems or conflicts that might bubble up anytime.”

Chapter 5 Conclusions and Discussion

Conclusion

The roles of middle managers in inter-organizational knowledge transfer

Following Yin's replication logic (Yin 2003), cross-experiments should be used to predict similar results. In order to get a clear comparison, the Role Involvement Index of company X (Table 4.6) and company Y (Table 4.9) was gathered together in Table 5.1.

Table 5.1: Comparison of Role Involvement Index between Company X and Y

Company X		Company Y	
Role	RII	Role	RII
<i>Problem solver I</i>	100%	<i>Problem solver I</i>	100%
<i>Radar</i>	100%	<i>Implementer</i>	90%
<i>Filter</i>	83%	<i>Champion</i>	90%
<i>Facilitator</i>	83%	<i>Problem solver II</i>	87%
<i>Coordinator</i>	75%	<i>Radar</i>	87%
<i>Champion</i>	67%	<i>Synthesizer</i>	80%
<i>Implementer</i>	59%	<i>Filter</i>	80%
<i>Problem solver II</i>	56%	<i>Coordinator</i>	80%
<i>Catalyst</i>	50%	<i>Catalyst</i>	70%
<i>Synthesizer</i>	50%	<i>Facilitator</i>	60%

The percentage of “Yes” answers for both companies (Table 4.5 and 4.8) was gathered together and compared commonality and difference in 5.2.

Table 5.2: Comparison and Conclusion of Summary of “Yes” answers

		Company X	Company Y	Conclusion
Radar	▪ Recognizing knowledge gap	80%	100%	commonality
	▪ Defining possible solutions	80%	100%	commonality
	▪ Identifying the possible knowledge sources	100%	100%	commonality
Filter	▪ Evaluating the possible sources of the required knowledge	100%	83%	commonality
	▪ Suggesting and prioritizing the different courses of action to acquire new knowledge	60%	83%	Difference
Champion	▪ Evaluating the merits of new knowledge transfer proposals	100%	83%	commonality
	▪ Defining and justifying the importance of new knowledge transfer proposals to upper-level managers	80%	50%	Difference
Catalyst	▪ Identifying the different groups, in source and target firms, that involved in knowledge transfer process	80%	50%	Difference
	▪ Creating the right context for knowledge sharing among different groups	60%	50%	commonality
Coordinator	▪ Harmonizing differences among the different groups involved in knowledge transfer process	60%	50%	commonality
	▪ Enhancing communication and understanding among the different groups involved in knowledge transfer process	100%	100%	commonality
Facilitator	▪ Modifying required knowledge according to the conditions of recipient	60%	83%	Difference

	▪ Relaxing regulations and procedures in order to get new projects started	20%	33%	commonality
Synthesizer	▪ Integrating the newly acquired knowledge with existing knowledge	80%	50%	Difference
Problem solver I	▪ Identifying the problems associated with the localization and integration of newly acquired knowledge	100%	100%	commonality
	▪ Helping the involved parties in solving the emerging problems	100%	100%	commonality
Implementer	▪ Embedding the newly acquired knowledge in organizational processes and routines	80%	50%	Difference
	▪ Monitoring knowledge institutionalization activities to ensure that they support organization objects	100%	67%	Difference
Problem solver II	▪ Communicating with top managers for potential conflicts between new structures or action plans and strategic intend	80%	67%	Difference
	▪ Communicating with lower managers to find out difficulty for the action of new plans	80%	50%	Difference
	▪ Preparing for problems or conflicts that might bubble up anytime	100%	50%	Difference

After comparing the findings of the two cases, the highest involvement for middle managers in the process of inter-organizational knowledge transfer was Problem Solver I in the Implementation stage. Playing this role, middle managers identified and solved problems by absorbing and integrating newly acquired knowledge. The role as Problem Solver I in the third stage was different from that in the fourth stage (Internalization stage). Problem Solvers I, in the Implementation stage, stood at a point where they could

see the problem that exists during the process of knowledge internalization. They looked at problems from the view of knowledge recipients, who emphasized solving problems to help others absorb and integrate knowledge and adjusted gaps between old knowledge and new information. Problem Solvers II in the last stage – Internalization stage - , standing at a higher point, looked at problems with an organizational view. They looked at problems existing from the process of knowledge institutionalization and routinalization that might influence organizational structures or intentions.

Initialization Middle managers were highly involved in most of the activities of the three roles in this stage which enabled the whole process of knowledge transfer within the organization. The commonality between middle managers from the two different companies suggested

- Middle managers acted as Radars to become aware of requirements, discover opportunities, and create knowledge maps to trigger the process of knowledge transfer.
- They also acted as Filters to get possible sources and methods to retrieve the new knowledge required.
- Meanwhile, the findings also suggested that middle managers were Champions who evaluated the merits of new knowledge transfer proposals.

The difference on the activity “Suggesting and prioritizing the difference courses of action to acquire new knowledge” between managers from different companies, however, suggested that this activity needs to be further tested in other companies using the same

analysis technique. The activity “defining and justifying the importance of new knowledge transfer proposals to upper managers” also required further tests in other companies.

To compare sources that middle managers chose to get the knowledge required, the average of priorities for these two companies (Table 4.7 and Table 4.10) was gathered in Table 5.3. The lower the number given in the scale, the higher the priority.

Table 5.3: Comparison of Priorities to Sources of knowledge between Company X and Y

Sources	Upper managers	Peers	Lower managers	Competitors	Publicly available sources	Authorities	Relatives	Friends
Average of priorities (Company X)	4.0	3.7	5.8	7.2	1.7	5.7	6.5	4.2
Average of priorities (Company Y)	4.4	2.2	4.8	5.6	3.6	3.2	7.6	5.0

The findings suggested that

- Peers were sources that middle managers were likely to choose
- Lower managers, competitors, and relatives were those sources that middle managers were most unlikely to choose
- Upper managers and friends were those sources that middle managers were neither likely nor unlikely to choose.

Interrelation

Except the results for the activity “Identifying the different groups, in source and target firms, that involved in knowledge transfer process,” the same results occurred for both companies in this stage. That is,

- Middle managers were not thoroughly involved in the activity for the Catalyst role, which was “Creating the right context for knowledge sharing among different groups.”
- As for the role of Coordinator, middle managers were not involved much in the first activity “Harmonizing differences among the different groups involved in knowledge transfer process,” while they were highly involved in the second activity “Enhancing communication and understanding among the different groups involved in knowledge transfer process.” Such low involvement on the two activities might be because of the intervention of professional units. Middle managers might not have enough knowledge background for the new knowledge required. Certain professional units had to participate in the knowledge transfer process to train, create the right context, and harmonize differences between groups involved. Middle managers, in this case, would only assist in enhancing communication and understanding among groups rather than all the other activities of this stage.

Implementation

The difference between the results for the two companies on the activity “Modifying required knowledge according to the conditions of recipient” and on the role as Synthesizer requires further testing on these activities and roles in other companies. However, the commonality on other activities/roles suggests that in this stage,

middle managers were not involved in relaxing regulations and procedures in order to get new projects started. The reason of such low involvement might be because regulations and procedures are something that exists within the company. They represent parts of organizational culture that are not easily changed in reality. In addition, changing regulations and procedures is something that touches the structure of the whole organization that some middle managers look at as responsibilities of their upper managers.

The commonality on all the activities of the Problem Solver role suggested that middle managers were highly involved in the role as Problem Solver. They acted as Problem Solvers to identify problems associated with localization and integration of newly acquired knowledge. They also helped recipients solve emerging problems, better absorb new knowledge, and adjust the gap between their old knowledge and new.

Internalization

The difference on all the activities for the Implementer role suggests further study should be conducted in other companies. It was hard to tell middle managers' roles in aligning organizational action with strategic intentions from the current cases. As discussed above, the role as Problem Solver in this stage was different from that in the third stage (Implementation stage). In this stage, instead of resolving conflicts of absorbing and integrating newly acquired knowledge, middle managers dealt with conflicts or problems between strategic intentions and daily operations after newly acquired knowledge integrated. They looked at problems existing in the process of knowledge institutionalization and routinalization that might influence organizational

structure or intentions and daily operations. There was no commonality, however, on the results of all the three activities for this role, which required tests on these activities in other companies.

The impact of national culture on middle managers' roles

According to the information provided by middle managers, the career mapping and job description are the same in subsidiaries all over the world. Thus, we can consider that subsidiaries within the same company are organized similarly while being located in a different national and cultural context. Again, cross-experiment analysis was required to examine the impact of national culture on middle managers' roles. Results from the two companies (Table 4.11 and Table 4.13) were summarized in Table 5.4 to get a better comparison. This table summarized the differences between the percentage of "Yes" answers of middle managers in China and North America as well as the reasons for such differences. Overall, national culture influences middle managers' behavior heavily in the first stage (Initiation) and the last stage (Implementation).

Table 5.4: Comparison and Conclusion of Summary of “Yes” answers classifier by Culture

		Company X		Company Y		Conclusion
		China	North America	China	North America	
Radar	▪ Recognizing knowledge gap	100%	100%	50%	100%	
	▪ Defining possible solutions	100%	100%	100%	67%	
	▪ Identifying the possible knowledge sources	100%	100%	100%	100%	
Filter	▪ Evaluating the possible sources of the required knowledge	67%	100%	100%	100%	
	▪ Suggesting and prioritizing the different courses of action to acquire new knowledge	67%	100%	0%	100%	<i>This difference can be attributed to difference of PD index between China and North America</i>
Champion	▪ Evaluating the merits of new knowledge transfer proposals	67%	100%	100%	100%	
	▪ Defining and justifying the importance of new knowledge transfer proposals to upper-level managers	33%	67%	50%	100%	<i>This difference can be attributed to difference of PD index between China and North America</i>
Stage 1 Initialization						

Stage 2 Interrelation					Stage 3 Implementation				
<i>Catalyst</i>	▪ Identifying the different groups, in source and target firms, that involved in knowledge transfer process	67%	33%	50%	100%				
	▪ Creating the right context for knowledge sharing among different groups	67%	33%	50%	67%				
	▪ Harmonizing differences among the different groups involved in knowledge transfer process	67%	33%	50%	67%				
	▪ Enhancing communication and understanding among the different groups involved in knowledge transfer process	100%	100%	100%	100%				
<i>Coordinator</i>	▪ Modifying required knowledge according to the conditions of recipient	67%	100%	100%	33%				
	▪ Relaxing regulations and procedures in order to get new projects started	33%	33%	0%	33%				
<i>Synthesizer</i>	▪ Integrating the newly acquired knowledge with existing knowledge	67%	33%	50%	100%				

	Problem solver I	<ul style="list-style-type: none"> Identifying the problems associated with the localization and integration of newly acquired knowledge 	100%	100%	100%	100%	
		<ul style="list-style-type: none"> Helping the involved parties in solving the emerging problems 	100%	100%	100%	100%	
	Implementer	<ul style="list-style-type: none"> Embedding the newly acquired knowledge in organizational processes and routines 	33%	67%	50%	100%	<i>This difference can be attributed to difference of PD index between China and North America</i>
		<ul style="list-style-type: none"> Monitoring knowledge institutionalization activities to ensure that they support organization objects 	67%	67%	100%	100%	
		<ul style="list-style-type: none"> Communicating with top managers for potential conflicts between new structures or action plans and strategic intend 	67%	67%	50%	100%	
		<ul style="list-style-type: none"> Communicating with lower managers to find out difficulty for the action of new plans 	67%	33%	50%	100%	
	Problem solver II	<ul style="list-style-type: none"> Preparing for problems or conflicts that might bubble up anytime 	67%	33%	100%	100%	
Stage 4 Internalization							

Initialization

- The commonalities on the results for the two companies predicted the impact of national culture on the involvement of middle managers in the activity “Suggesting and prioritizing the different courses of action to acquire new knowledge.” Chinese middle managers were involved in this activity less than middle managers from North America, which was consistent with what was mentioned before in Chapter 2.
- As discussed in Chapter 2, power distance and individualism vs. collectivism were chosen as the representatives of national culture in this work. Individualism, however, is “the degree to which people in a country prefer to act as individuals rather than as members of groups” (Hofstede 1994, p.6). It dealt with members’ respect and loyalty to the group they belong to, which was not a suitable factor that led to the difference on the above activity “Suggesting and prioritizing the different courses of action to acquire new knowledge.”
- Such difference might be attributed to the differences in the Power Distance Index. Power Distance is “the degree of inequality among people which the population of a country considers a normal: from relatively equal (that is, small power distance to extremely unequal (large power distance)” (Hofstede 1994, p.5). The larger the Power Distance, the more people will accept unequal authority. In large Power Distance societies, middle managers will rely more on their seniors’ direction instead of challenging the whole picture aggressively. According to Hofstede (1984), the Power Distance scores of people in Hong Kong and China are 68 and 80 separately while those in Canada and America

are 39 and 40. As a result, one would expect that Chinese middle managers will depend more on their upper manager's ideas instead of querying existing knowledge aggressively. Hence, this predicted less involvement of Chinese middle managers in activities suggesting and prioritizing actions in the knowledge transfer process.

- National culture also influenced middle managers' behavior in the involvement of the third role as Champion. Consistent with what was discussed in Chapter 2, Chinese middle managers were involved in this role less than managers in North America, especially in the second activity "Defining and justifying the importance of new knowledge transfer proposals to upper-level managers."
 - As mentioned above, power distance and individualism vs. collectivism were chosen as the representatives of national culture in this work. Collectivism decided the degree to which middle managers prefer cooperation and group work. It could not explain why middle managers acted differently on such activity.
 - On the contrary, Power Distance Index might explain such difference. Chow (2001) mentioned that "members of high-power-distance cultures expect people in superior positions to be more intelligent than their subordinates and consider involvement of subordinates in decision making to be a sign of poor leadership" (p.88). In addition, People from different Power Distance societies interact differently with their authorities. In large Power Distance societies, middle managers would show their loyalty to upper managers and be unwilling to challenge their juniors. As a result, Chinese middle managers performed the

activity of defining and justifying the importance of new knowledge transfer proposals to upper-level manager less and believed in their upper manager's intelligence to evaluate and justify the importance of knowledge transfer proposals.

- To investigate the impact of national culture on middle managers' priority to each source of knowledge, average of middle managers' priority to each source was gathered together in Table 5.5 grouped by geographical area as well as company. Given that each source provided the same knowledge, the lower the number given in the scale, the higher the priority.

Table 5.5: Comparison of Priorities to Sources of knowledge between Company X and Y classified by Culture*

Sources		Upper managers	Peers	Lower managers	Competitors	Publicly available sources	Authorities	Relatives	Friends
Company X	Average of priority of Chinese middle managers	4.0	5.0	6.3	6.3	1.7	4.0	6.3	4.3
	Average of priority of middle managers in North America	4.0	2.3	5.3	8.0	1.7	7.3	6.7	4.0
Company Y	Average of priority of Chinese middle managers	4.0	3.5	6.0	6.0	2.0	1.0	8.0	5.5
	Average of priority of middle managers in North America	4.7	1.3	4.0	5.3	4.7	4.7	7.3	4.7

** The lower the number given in the scale, the higher the priority.*

The commonalities of middle managers in these two companies on the sources of new knowledge indicate the following.

- The sources with the highest priority were publicly available sources and authorities for Chinese middle managers while peers received the highest priority for middle managers in North America.
- Lower managers, competitors, relatives, and friends were those sources that all middle managers, no matter where they were from, were unwilling to choose.
- The priority for upper managers and friends rested in the middle of all sources.

The impact of national culture was mainly shown on the priority for peers and authorities.

- Peers were the favorite sources for middle managers in North America, but they were not the favorite sources for Chinese middle managers.
- On the contrary, authorities were Chinese middle managers' favorite sources, while authorities were among the least favorite sources for managers in North America.

All these differences might be attributed to the Power Distance Index. As mentioned in Chapter 2, valuation is a subjective evaluation of human activity, and this valuation is influenced by culture. Cultures shape the definition of what knowledge is relevant and important and where people should get such important knowledge. People in low Power Distance societies are ready to challenge any contradictory official pronouncement and will seek valuable cues from any resources that are equal or under them. In high Power Distance cultures, juniors are highly dependent on seniors and take their "cues concerning information, processes and so forth rather than trust equals to set direction

and those under them to provide valuable input” (Yoo and Torrey 2002, p.20). Thus, with such a high Power Distance Index rating of 68 for Hong Kong and 80 for China, Chinese middle managers relied more on authority sources and were not willing to search for help from peers or lower managers who are equal or lower than them. On the contrary, middle managers in North America, with a low Power Distance of 39 for Canada and 40 for the US, were more willing to search for help from useful available sources no matter whether such sources are equal or even lower in status than them. Similarly, individualism and collectivism were irrelevant regarding behavioral difference of middle managers from different areas. The Individualist or collectivist orientations placed emphasis on competition or cooperation with group members. Such dimension of national culture didn’t influence middle managers’ priority relating to source of knowledge.

Internalization No commonalities were found on the impact of national culture in the Interrelation stage or the Implementation stage, but they were found in the Internalization stage. The impact of national culture was found on the involvement of Chinese middle managers in the activity “Embedding the newly acquired knowledge in organizational processes and routines” of the Implementer role. They were involved much less than managers from North America. Again, Individualism vs. Collectivism, which influence the ways of middle managers’ attitude towards independent work, competition and cooperation and involvement in group affairs, was not a good factor in explaining the different levels of involvement of the middle managers in these two areas. This difference could also be a result of Power Distance. As discussed above, Power

Distance deals with leaders' decision power. It "affects both the way in which people organize themselves and the way in which they write about organizing" (Hofstede 1994, p.4). Middle managers from high Power Distance societies will obey their upper managers. The activity of "Embedding the newly acquired knowledge in organizational processes and routines" was a firm-wide activity that might affect fundamental organizational processes and routines. These activities were more likely to be performed by higher-level managers in large Power Distance society which led to the less involvement of Chinese middle managers. No other commonalities were found in this stage which suggests further testing on other sets of cases.

Other factors

From the above analysis, middle managers in different areas were found acting differently on three activities. Would these differences be attributed to other factors, such as industry, working experience and so on?

Industry: from the analysis mentioned above, we could see that the two selected research sites were in two totally different industries. The impact of national culture, however, was the same for both companies. Based on the figures in Table 4.5, Table 4.8, Table 4.11 and Table 4.13, the percentage of "Yes" answers on the above three activities for middle managers in the two companies in different areas was extracted and shown in Table 5.6 as below. Column 1 and 4 indicated the percentage of "Yes" answers for all middle managers in these two companies separately, while column 2 and 3 summarized the percentage for "Yes" answers of middle managers in Company X but in different

areas and Column 5 and 6 summarized answers for Company Y. Table 5.6 indicates that no matter which industry middle managers worked in, Chinese middle managers were involved less in these activities than middle managers from North America. Thus, industry was not suitable to explain such findings.

**Table 5.6 Comparison and Conclusion of Summary of “Yes” answers
classified by Culture**

	Company X			Company Y		
	Total	China	North America	Total	China	North America
Column	1	2	3	4	5	6
▪ Suggesting and prioritizing the different courses of action to acquire new knowledge	83%	67%	100%	60%	0%	100%
▪ Defining and justifying the importance of new knowledge transfer proposals to upper-level managers	50%	33%	67%	80%	50%	100%
▪ Embedding the newly acquired knowledge in organizational processes and routines	50%	33%	67%	80%	50%	100%

Working experience

In order to investigate the impact of working experience on the findings, all the answers to the three activities along with the informants' working experience were gathered together in Table 5.7.

Table 5.7 Answers to three activities with working experience (Source: Appendix 14 – 24)

	China	China	China	North America	North America	North America	China	China	North America	North America	North America
▪ Suggesting and prioritizing the different courses of action to acquire new knowledge	Yes	No	Yes	Yes	Yes	Yes	No	N/A	Yes	Yes	Yes
▪ Defining and justifying the importance of new knowledge transfer proposals to upper-level managers	No	No	Yes	Yes	Yes	N/A	No	Yes	Yes	Yes	Yes
▪ Embedding the newly acquired knowledge in organizational processes and routines	No	N/A	Yes	No	Yes	Yes	No	Yes	Yes	Yes	Yes
Working Experience	5	10	8	6	15	6	5	8	13	6	12

In order to get a better comparison, data in Table 5.7 was counted, grouped by working experience and presented into percentage in Table 5.8. Column 1 in Table 5.7 summarized the percentage of “Yes” answers of middle managers with working experience less than 10 years. Column 2 indicated the percentage of “Yes” answers of

Chinese middle managers with working experience less than 10 years while Column 3 indicated that of middle managers in North America with working experience less than 10 years. Similarly, Column 4 summarized that of middle managers with working experience more than 10 year. Column 5 and 6 gathered answers of middle managers with working experience more than 10 years. Further, given that all of the managers had at least five years of experience, it makes it less likely that years experience would account for the differences.

Table 5.8 Comparison and Conclusion of Summary of “Yes” answers classified by working experience

Working Experience	< 10			>10		
	Total	China	North America	Total	China	North America
Column	1	2	3	4	5	6
▪ Suggesting and prioritizing the different courses of action to acquire new knowledge	71%	50%	100%	75%	0%	100%
▪ Defining and justifying the importance of new knowledge transfer proposals to upper-level managers	57%	50%	67%	75%	0%	100%
▪ Embedding the newly acquired knowledge in organizational processes and routines	57%	50%	67%	75%	0%	100%

Although it showed difference on the behaviors of middle managers with different working experience, the impact of national culture was apparent on these three activities no matter how long middle managers had worked. Thus, national culture appears to better explain the findings.

Limitations

It is worth noting some of the limitations of this work. First and most obvious, more multi-national organizations and middle managers are needed. Because of the constraints of time and the accessibilities to organizations, this work was performed with a rather small number of cases. In addition, informants investigated are mainly in product, marketing, and sales departments in these two organizations. Thus, there is no reason to assume that the findings may be generalized to other areas of the organizations. Second, the findings are based on self-reported data. This might bring in potential respondents' bias. Plus, some informants participated in the work were introduced by other informants, which might also cause bias on the selection of informants. Third, like most social science models, some potentially important factors are excluded to make the study more simplified. Some important factors, such as types of knowledge, are ignored that might influence the effectiveness of inter-organizational knowledge transfer.

Implication for practitioners

Implication for research The main contribution of this work is to develop a theoretically sound descriptive model of the role of middle managers in the different

stages of inter-organizational knowledge transfer process. This model identifies the roles of middle managers in each stage of inter-organizational knowledge transfer, while recognizing the impact of national culture on these roles. The findings clarify middle managers' roles and related activities in each stage. The results also imply how national culture affects each role and activity. This work proposes middle managers' behavior differently in various cultural settings as well as in various knowledge transfer stages. It sets up a framework that suggests the relationship among the roles of middle managers in different knowledge transfer stages, national culture, and the effectiveness of knowledge transfer.

The second contribution of this work is the development of the research instrument to investigate the roles of middle managers in the process of knowledge transfer. There is a lack of empirical study on such topic. The research instrument constructed in this work, although still requiring further testing, provides a base and reference for further development of standard research instruments on such important topic.

Implication for practice For knowledge managers, the potential usefulness of this work may be to provoke thinking about how middle managers should behave to increase the effectiveness of inter-organizational knowledge transfer. This work illustrates the importance of both culture and the role of middle managers in knowledge transfer for multi-national corporations. In particular this work provides managers in multi-national corporations a better understanding of the cultural differences in knowledge transfer. It

also suggests guidelines on how existing norms or practices are likely to support or undermine the effectiveness of knowledge transfer.

Implication for future research

Although there are limitations of this study, contributions are believed to be made for future research. First, the findings of this work need to be further tested and expanded with more cases. Difference was found on the findings of the two companies during the cross-experiment analysis, which required further test in more companies. Further more, this study investigated two organizations in two countries. There are substantial differences among organizations and countries that cannot be ignored. Thus, studies are required in more organizations and countries.

Another fruitful area for future research would be further testing of the research instruments constructed in this work on the investigation of middle managers' roles in the process of inter-organizational knowledge transfer. The research instrument constructed in this work requires further testing of its reliability and validity and an evaluation of whether the factors proposed by the questionnaire hold.

A third line of productive inquiry would be a deeper examination of other factors. There are many other possible factors such as types of knowledge. For simplification, this work only examines one type of knowledge, explicit knowledge. However, tacit knowledge, involving "intangible factors embedded in personal beliefs, experiences, and values" (Inkpen 1998, p.74) requires great emphasis.

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Appendix

Appendix 1 Contact Letter

Dear Sir/Madam XX,

I'm a master student of Management Information Systems of John Molson Business School of Concordia University, Montreal, Canada. I'm conducting a research with the topic of the cultural impact to the effectiveness of knowledge management. The main purpose is to explore what role middle managers should play during different stages of knowledge management under various cultural contexts.

As a well-organized company and presenting globally, your organization is selected to be among my sources of the case study. A 10-minute interview would be conducted. By means of this case study approach, we expect to identify:

- What are the roles of middle managers in inter-organizational knowledge transfer process?
- What is the impact of national culture on the roles of middle managers in inter-organizational knowledge transfer process?

Your time, experience and patience are utmost essential for this case study. The result of this study would be advantageous for stimulating the effectiveness of knowledge management. As a result, it would help to maximize the creation of organizational knowledge/capabilities that has been widely accepted as a key organizational source of sustainable advantage in today's keen global competitions.

I will only use your feedback for my work. Your information will be strictly kept confidential and be prohibited from being used for any other purposes. Should you wish to be included in my mailing list for the final report, I will be glad to make the proper arrangement. Your participation can be terminated at any time you feel like.

Here is the information of my supervisor. Please feel free to contact him if you need more details.

El Sayed ABOU ZEID (Associate Professor, Department of DS and MIS)

Office Phone: (514) 848-2424 ext 2979

E-mail: el-sayed@jmsb.concordia.ca

Sincerely,

Yie LI

Appendix 2 Consent Form

CONSENT FORM TO PARTICIPATE IN RESEARCH

This is to state that I agree to participate in a program of research being conducted by Yie LI of Department of Decision Science and Management Information Systems of Concordia University.

A. PURPOSE

I have been informed that the purpose of the research is to develop and empirically test a model about the impact of national culture on the effectiveness of knowledge transfer.

B. PROCEDURES

Data for this study will be gathered through an interview and a survey. Potential respondents will receive a survey package including an invitation letter and questionnaire. It will take 15 minutes for the interview and 10 minutes for respondents to fill in the questionnaire. All information will be collected on an anonymous basis. Information includes backgrounds, personal information and opinion from respondents and so on. There is no risk or discomfort involved.

C. CONDITIONS OF PARTICIPATION

- I understand that I am free to withdraw my consent and discontinue my participation at anytime without negative consequences.
- I understand that my participation in this study is CONFIDENTIAL.
- I understand that the data from this study may be published.

I HAVE CAREFULLY STUDIED THE ABOVE AND UNDERSTAND THIS AGREEMENT. I FREELY CONSENT AND VOLUNTARILY AGREE TO PARTICIPATE IN THIS STUDY.

NAME (please print) _____

SIGNATURE _____

WITNESS SIGNATURE _____

DATE _____

If at any time you have questions about your rights as a research participant, please contact Adela Reid, Compliance Officer, Concordia University, at 514.848.2424,x.7481 or by email at Adela.Reid@Concordia.ca

Appendix 3 Questionnaire

Are you involved in the following activities?

In this questionnaire, knowledge means explicit knowledge, that is, it is systematic, and can be communicated and shared with others, such as documents, software etc.

- | | |
|--|----------------|
| ▪ Recognizing the need for new knowledge to perform certain tasks in the organization | Yes No N/A |
| ▪ Defining and justifying the importance to acquire new knowledge to upper management | Yes No N/A |
| ▪ Defining possible solutions to obtain new knowledge required | Yes No N/A |
| ▪ Identifying possible sources of knowledge required | Yes No N/A |
| ▪ Screening these possible sources | Yes No N/A |
| ▪ Which sources will you likely to choose, supposing you can obtain the same new knowledge required from them? Please rank by number.

<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <div style="margin-bottom: 5px;">_____ Upper managers</div> <div style="margin-bottom: 5px;">_____ Peers</div> <div style="margin-bottom: 5px;">_____ Lower managers</div> <div style="margin-bottom: 5px;">_____ Competitors</div> <div style="margin-bottom: 5px;">_____ Publicly available sources (newspaper, radio, magazines, and etc.)</div> <div style="margin-bottom: 5px;">_____ Authorities</div> <div style="margin-bottom: 5px;">_____ Relatives</div> <div style="margin-bottom: 5px;">_____ Friends</div> </div> <div style="width: 45%;"></div> </div> | |
| ▪ Suggesting and prioritizing various methods to acquire new knowledge to upper managers | Yes No N/A |
| ▪ Evaluating the merits of proposals to acquire new knowledge required | Yes No N/A |
| ▪ Identifying the specific persons or sources possessing the knowledge required as well as those who will get these | Yes No N/A |

new knowledge

(to make it clear, we call those person or sources from where to get the knowledge as senders, and those who will get the acquired knowledge as recipients in the later part of this questionnaire)

▪ Creating channels to let recipients contact senders	Yes	No	N/A
▪ Facilitating communication and understanding between senders and recipients	Yes	No	N/A
▪ Harmonizing differences among senders and recipients	Yes	No	N/A
▪ Modifying acquired knowledge according to the conditions of recipients	Yes	No	N/A
▪ Integrating the knowledge newly acquired with knowledge existing within the organization	Yes	No	N/A
▪ Relaxing regulations and procedures to encourage absorbing new knowledge	Yes	No	N/A
▪ Finding out the problems associated with knowledge integration	Yes	No	N/A
▪ Helping recipients in solving the emerging problems in the process of absorbing new knowledge	Yes	No	N/A
▪ Embedding the newly acquired knowledge in organizational daily processes and operations	Yes	No	N/A
▪ Ensure integrated knowledge supporting organization objects	Yes	No	N/A
▪ Communicating with upper managers for potential conflicts between the new organizational processes and operations and strategic intend	Yes	No	N/A
▪ Communicating with lower managers to find out difficulty for the action of new organizational processes and operations	Yes	No	N/A
▪ Preparing contingency plan	Yes	No	N/A

- Are you involved in any other activities during the process of transferring new knowledge? Please specify (random sequence is fine).

a. _____

b. _____

c. _____

d. _____

e. _____

f. _____

g. _____

h. _____

Job Title: _____

Company: _____ Country: _____

Department: _____

Experience in this field: _____ years

Thank you very much for your participation!

Appendix 4 Contact Summary Form

Contact Type:

Phone: _____

Mail: _____

MSN: _____

Site: _____

Contact Date: _____

Today's Date: _____

Questions investigated	Answers from informants
------------------------	-------------------------

Appendix 5 Company Profile (Company X)

(File #: CX_CP_1)

1. Website 1

More Than a Distribution Company

We are a world-class leader and innovator in the distribution and marketing of semiconductors and passive, interconnect and electro-mechanical components. We operate from 155 offices in 35 countries in the Americas, Europe and Asia.

More Than Electronic Components

Our most valuable asset is our people. The team worldwide are recruited from diverse backgrounds. Our strength is their knowledge, enthusiasm and experience. Our people have a common philosophy - XX. We are the only electronic components distribution company to provide 24-hour product marketing capability and expertise to our worldwide customer base.

Having served the electronics industry for more than 35 years, Company X is uniquely positioned as the only vertically integrated industrial distributor of electronic components supporting customers of all sizes worldwide. We are continuously introducing new innovative programs, leading edge technology, superior service and a design-in focus through our Technical Solutions Management program.

Our Mission Statement

Our mission at Company X is to Delight the Customer by providing an exemplary standard of quality service through superior product marketing, outstanding technical solution support, in-depth inventory, professional selling procedures and the most reliable operational systems in distribution.

...

We're just a click away. From the Americas to Europe and Asia, Company X is the world's only fully integrated global electronic components distribution company. Please start by selecting a continent.

- Asia
- Australia
- Europe
- North America
- South America

2. Website 2

Company X may not always be clear, but it seems unstoppable. Founded in 1968 by owner and reclusive billionaire XX, the company has become one of the world's top distributors of electrical and electromechanical components. Company X's broad product line includes memory chips, optoelectronics, resistors, and microcontrollers, as well as passive and resistive components. The company sells the items online, while operates a chain of 18 retail stores in Canada and the US. Company X's suppliers include Agilent, Fairchild Semiconductor, Motorola, and dozens of other high-tech heavyweights.

Financial Overview

	2003	2002	2001	2000*
Annual Sales (\$ mil.)	2,801.7 (est.)	2,603.0 (est.)	2,514.3	3,400.0

3. Website 3

Company X, a global leader in electronics distribution, ranks 3rd in component sales worldwide. Founded in 1968, the company has emerged as one of the most important entities in the electronics distribution industry and today, is recognized around the globe as one of the industry's most innovative organizations. This position is built upon Company X's commitment to maintain close business partnerships with both suppliers and customers, coupled with the strength of its commercial and technical competencies through all stages of the design-production cycle. The company employs 5,000 employees in 155 offices in 35 countries around the world.

Appendix 6 Company Profile (Company X)

(File #: CY_CP_1)

1. Website 1

Mission

Company Y helps people around the world grow, live better and get more out of life through tastier, more varied and healthier food products - every day.

Ranks

Company Y, a leader in the world food industry

- N° 1 worldwide in fresh dairy products
- N° 1 worldwide for packaged water (by volume)
- N° 2 worldwide in cereal biscuits and snacks

Workforce

- 88,607 employees in more than 120 countries in
Africa & Middle East

Latin America

North America

Asia-Pacific

Eastern Europe

Western Europe

Financial results

- Turnover in 2003: 13,131 million Euros (+ 7.2%)
- Operational Results: 1,604 million Euros
- Net Income: 4,839 million Euros

2. Website 2

Financial Highlights

Fiscal Year End:	December
Revenue (2003):	16508.00 M
Revenue Growth (1 yr):	16.00%
Employees (2003):	88,607
Employee Growth (1 yr):	(-3.90%)

3. Website 3

BUSINESS SUMMARY

Company Y is an international food and beverage company that focuses on three core activities: fresh dairy products, beverages and biscuits and cereal products. Its other food businesses consist of sauces, The Company also markets Asian-style grocery products under the YY brand name, which are exported to Western Europe from Hong Kong. The Company sells its fresh dairy products under the brand names YY. The company's beverage activities consist of packaged water and other non-alcoholic beverages. Its biscuit products include cookies, savory snacks, crispbreads and crackers and packaged cakes.

FINANCIAL SUMMARY

For the fiscal year ended 12/31/04, total revenue increased 4% to EUR13.7 billion. Net income decreased 62% to EUR317M. Total revenue reflects increased sales from the Dairy Products, Beverages, Biscuits and Cereal Snacks and Other business segments. Net income suffered from negative exchange effects and consolidation re-structuring.

4. Website 4

Company Y is the global leader in cultured dairy products (including yogurt, cheese, and dairy desserts) and major producer of biscuits with its cookies and crackers. Its brands make it #2 in bottled water. Company Y has dozens of regional and international brands. It owns almost 45% of YY, a maker of glass containers.

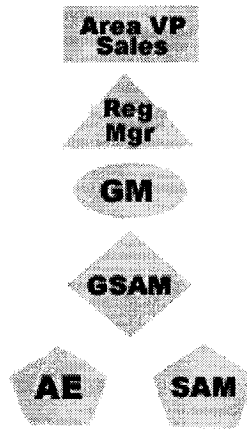
Financial Overview

	2004	2003	2002	2001
Annual Sales (£ mil.)	9,631.6	9,282.4	8,873.9	8,884.7
Annual Net Income (£ mil.)	222.7	593.2	840.2	81.3

Appendix 7 Department Structure - Branch Sales (File#: CX_OD_2)

Branch Sales

The Branch Sales team is structured as follows:



Appendix 8 Department Structure – Product Marketing (File#: CX_OD_3)

Product Marketing

This department is structured as follow:



Appendix 9 Job Description -WWAM (File#: CX_JD_1)

World Wide Asset Manager (WWAM)

POSITION OVERVIEW:

The Worldwide Asset Manager leads an Asset Management team within one or more distinct product groupings. Sets and executes strategy world wide to maximize return on inventory investment while driving sales and margin. Leads and develops the Asset Managers, and interfaces between the team and senior management. Manages and develops supplier relationships to achieve inventory goals. Participates as needed in Task Forces and special projects to enhance the overall efficiency of Asset Management and/or the tools available to Asset Managers.

PRIMARY RESPONSIBILITIES:

- Set strategic direction to maximize return on global inventory investment: profile inventory for sales/margin drivers; set objectives for inventory levels, reduction of excess inventory, and returns.
- Develop and implement global purchasing strategies to maximize margin and improve availability of product. Negotiate and review all strategic buys.
- Develop and maintain strong key relationships with suppliers and the sales field.
- Review entire inventory monthly and manage the monthly review process between Asset Managers and their Marketing counterparts.
- Lead, manage, and develop the team, team goals. And execution of daily responsibilities.
- Develop and manage implementation of programs for the Asset and Marketing teams to drive reduction of excess inventory. Work with the stock rotation champions in the preparation or review of all stock rotations. Negotiate with suppliers for special returns/write-downs as needed.
- Participation in the development of process improvements to Asset Management function.

DIRECT REPORTS:

2-7

Appendix 10 Job Description - WWBM
(File#: CX_JD_2)

World Wide Business Manager (WWBM)

POSITION OVERVIEW:

A business unit head, leading a marketing team within a distinct product grouping. Sets and executes strategy worldwide with respect to achieving sales revenue, profit and inventory investment. Leadership and development of first line managers and their teams. Manage and develop supplier relationships to achieve marketing and revenue goals. Represent the product family to Customers and Sales branches

PRIMARY RESPONSIBILITIES:

- Deliver profitable sales growth through:
 - Inventory profiles
 - Competitive quoting
 - Specific marketing initiatives
- Inventory liability and supplier management
- Leadership, management and development of team and team goals.
- Business development and demand creation through product programs, investment positioning and supplier relations

DIRECT REPORTS:

7+

Appendix 11 Job Description - PM (File#: CX_JD_3)

Product Manager (PM)

POSITION OVERVIEW:

The Product Manager is responsible for sales and profit accountability for a class of products. They interact daily with suppliers including negotiating pricing, business reviews, promotion activity and continuous development building. The Product Manager handles elevations and significant business opportunities. They are responsible for training, motivating and managing a team of Product Specialists. They also oversee all quoting activities, analyze 'strategic quotes' and perform statistical analysis of daily/monthly reports. The Product Manager also prepares and negotiates product purchases and costs to maximize the class revenue and margin and they play a key role in worldwide inventory management.

PRIMARY RESPONSIBILITIES:

(Most frequent duties in order of importance)

- Drive sales and maximize margin through:
 - Inventory management
 - Quote strategies
- Train, motivate and manage a team of Product Specialists
- Develop employees through performance management
- Problem solving / troubleshooting
- Build and maintain supplier relations
- Oversee all quoting activity

DIRECT REPORTS:

2-7

Appendix 12 Job Description - GM

(File#: CX_JD_4)

General Manager (GM)

POSITION OVERVIEW:

The General Manager reports directly to the Regional Sales Manager. They are responsible for the overall branch performance and operations.

PRIMARY RESPONSIBILITIES:

- Set and optimize sales objectives from a signed account base for the branch in terms of overall numerical, broadening and image goals.
- Ensure the Group Strategic Account Managers (GSAMs) manage their team(s).
- Direct the GSAM, Strategic Account Managers, and Account Executives in key accounts.
- Conduct regular, formalized account reviews with the sales teams to review numerical, broadening, and image goals in an account. Reviews should be held once a month for top 90% of accounts and once a quarter for all other assigned accounts.
- Supplier quantity reviews and monthly opportunity reviews.
- Hold performance reviews and compensation adjustments of staff.
- Hire or replace sales staff.
- Ensure and assist sales team supports and promotes branch image to the local manufacturer reps.
- Ensure overall profitability of the branch
- Use and support all of Future Corporate programs in order to maximize on business opportunities. Programs include: Win the customer, BIM, E-Commerce, AE Concept, Assignment by Buyer, Discount, Rebate, Rep Influence, Rep Referral, Corporate Visit Strategy for Manufacturers, Reps and Customers, etc.
- Define approach to key industries (Network/Telecom) and specific customers like Virtual OEM's.
- Review design opportunities with the TSM, GSAMs, SAMs, within the first two weeks of each quarter.
- Interface with TSM's to identify Focus Accounts based on these design opportunities and branch ranking, market ranking, and key end technology in these accounts.
- Review the TSM focus account list together with the TSM by the end of Week 2 every quarter to evaluate if new accounts need to be added on (based on new design opportunities discovered by the sales team) or some old ones dropped (after qualification of the opportunity)
- Conduct focus account, supplier and activity reviews with the TSM manager. Formal reviews with the sales team and the TSM Manager should be held by the second week of each quarter.
- Ensure that the mutually agreed upon TSM focus accounts receive the proper attention by the TSM – including the number of visits to the customer's Engineering Department.

DIRECT REPORTS: 5+

Appendix 13 Job Description - GSM (File#: CX_JD_5)

Group Sales Manager (GSM) – Export

POSITION OVERVIEW:

The GSM is responsible for the growth and development of their own account base as the management of the Account Executives and their accounts. The GSM must train and motivate the Account Executives, ensure that each accounts in their group is maximized, review the accounts and assist the Account Executives to elevate deals.

PRIMARY RESPONSIBILITIES:

- Service and maximize own account base
- Monitor Account Executives
 - Quotes are being answered in time
 - New Account Executives are cold calling
 - Assist Account Executives with negotiating for prices
 - Follow up with Account Executives on quotes
- Communication with Account Executives
 - Maintain a vibrant and positive atmosphere within group
 - Motivate Account Executives
 - Set and communicate monthly goals and budgets
 - Review monthly goals and budgets
- Build and maintain a positive relationship with customers and Product Marketing

DIRECT REPORTS:

3-6

Appendix 14 Questionnaire 1 (File#: CX QN 1)

Are you involved in the following activities?

In this questionnaire, knowledge means explicit knowledge, that is, it is systematic, and can be communicated and shared with others, such as documents, software etc.

- | Item | Yes | No | N/A | |
|---|-----|-----|-----|-----|
| Recognizing the need for new knowledge to perform certain tasks in the organization | Y | Yes | No | N/A |
| Defining and justifying the importance to acquire new knowledge to upper management | N | Yes | No | N/A |
| Defining possible solutions to obtain new knowledge required | Y | Yes | No | N/A |
| Identifying possible sources of knowledge required | Y | Yes | No | N/A |
| Screening these possible sources | Y | Yes | No | N/A |
| Which sources will you likely to choose, supposing you can obtain the same new knowledge required from them? Please rank by number. | | | | |
| __1__ Upper managers | | | | |
| __6__ Peers | | | | |
| __4__ Lower managers | | | | |
| __5__ Competitors | | | | |
| __3__ Publicly available sources (newspaper, radio, magazines, and etc.) | | | | |
| __2__ Authorities | | | | |
| __7__ Relatives | | | | |
| __8__ Friends | | | | |
| Suggesting and prioritizing various methods to acquire new knowledge to upper managers | Y | Yes | No | N/A |
| Evaluating the merits of proposals to acquire new knowledge required | Y | Yes | No | N/A |

<ul style="list-style-type: none"> Identifying the specific persons or sources possessing the knowledge required as well as those who will get these new knowledge 	Y	Yes	No	N/A
(to make it clear, we call those person or sources from where to get the knowledge as senders, and those who will get the acquired knowledge as recipients in the later part of this questionnaire)				
<ul style="list-style-type: none"> Creating channels to let recipients contact senders 	Y	Yes	No	N/A
<ul style="list-style-type: none"> Facilitating communication and understanding between senders and recipients 	Y	Yes	No	N/A
<ul style="list-style-type: none"> Harmonizing differences among senders and recipients 	Y	Yes	No	N/A
<ul style="list-style-type: none"> Modifying acquired knowledge according to the conditions of recipients 	Y	Yes	No	N/A
<ul style="list-style-type: none"> Integrating the knowledge newly acquired with knowledge existing within the organization 	Y	Yes	No	N/A
<ul style="list-style-type: none"> Relaxing regulations and procedures to encourage absorbing new knowledge 	N	Yes	No	N/A
<ul style="list-style-type: none"> Finding out the problems associated with knowledge integration 	Y	Yes	No	N/A
<ul style="list-style-type: none"> Helping recipients in solving the emerging problems in the process of absorbing new knowledge 	Y	Yes	No	N/A
<ul style="list-style-type: none"> Embedding the newly acquired knowledge in organizational daily processes and operations 	N	Yes	No	N/A
<ul style="list-style-type: none"> Ensure integrated knowledge supporting organization objects 	Y	Yes	No	N/A
<ul style="list-style-type: none"> Communicating with upper managers for potential conflicts between the new organizational processes and operations and strategic intend 	Y	Yes	No	N/A
<ul style="list-style-type: none"> Communicating with lower managers to find out difficulty for the action of new organizational processes and operations 	Y	Yes	No	N/A
		Yes	No	N/A
<ul style="list-style-type: none"> Preparing contingency plan 	Y			

- Are you involved in any other activities during the process of transferring new knowledge? Please specify (random sequence is fine).

a. _Regarding failure analysis, I have to communicate between suppliers and customers_____

b. _____

c. _____

d. _____

e. _____

f. _____

g. _____

h. _____

Job Title: _____Product Manager_____

Company: _____X_____ Country: _____China_____

Department: _____Product Marketing_____

Experience in this field: ____6____ years

Thank you very much for your participation!

Appendix 15 Questionnaire 2 (File#: CX_QN_2)

Are you involved in the following activities?

In this questionnaire, knowledge means explicit knowledge, that is, it is systematic, and can be communicated and shared with others, such as documents, software etc.

- | | |
|---|--|
| <ul style="list-style-type: none"> ▪ Recognizing the need for new knowledge to perform certain tasks in the organization ▪ Defining and justifying the importance to acquire new knowledge to upper management ▪ Defining possible solutions to obtain new knowledge required ▪ Identifying possible sources of knowledge required ▪ Screening these possible sources ▪ Which sources will you likely to choose, supposing you can obtain the same new knowledge required from them? Please rank by number. | <p>Yes</p> <p>No</p> <p>Yes</p> <p>Yes</p> <p>No</p> |
|---|--|
-
- __3__ Upper managers

__4__ Peers

____ Lower managers

____ Competitors

__1__ Publicly available sources (newspaper, radio, magazines, and etc.)

____ Authorities

____ Relatives

__2__ Friends
- | | |
|--|---------------------|
| <ul style="list-style-type: none"> ▪ Suggesting and prioritizing various methods to acquire new knowledge to upper managers ▪ Evaluating the merits of proposals to acquire new knowledge required | <p>No</p> <p>No</p> |
|--|---------------------|

<ul style="list-style-type: none"> Identifying the specific persons or sources possessing the knowledge required as well as those who will get these new knowledge 	No
<p>(to make it clear, we call those person or sources from where to get the knowledge as senders, and those who will get the acquired knowledge as recipients in the later part of this questionnaire)</p>	N/A
<ul style="list-style-type: none"> Creating channels to let recipients contact senders 	Yes
<ul style="list-style-type: none"> Facilitating communication and understanding between senders and recipients 	N/A
<ul style="list-style-type: none"> Harmonizing differences among senders and recipients 	N/A
<ul style="list-style-type: none"> Modifying acquired knowledge according to the conditions of recipients 	N/A
<ul style="list-style-type: none"> Integrating the knowledge newly acquired with knowledge existing within the organization 	N/A
<ul style="list-style-type: none"> Relaxing regulations and procedures to encourage absorbing new knowledge 	Yes
<ul style="list-style-type: none"> Finding out the problems associated with knowledge integration 	Yes
<ul style="list-style-type: none"> Helping recipients in solving the emerging problems in the process of absorbing new knowledge 	N/A
<ul style="list-style-type: none"> Embedding the newly acquired knowledge in organizational daily processes and operations 	N/A
<ul style="list-style-type: none"> Ensure integrated knowledge supporting organization objects 	N/A
<ul style="list-style-type: none"> Communicating with upper managers for potential conflicts between the new organizational processes and operations and strategic intend 	N/A
<ul style="list-style-type: none"> Communicating with lower managers to find out difficulty for the action of new organizational processes and operations 	N/A
<ul style="list-style-type: none"> Preparing contingency plan 	N/A

- Are you involved in any other activities during the process of transferring new knowledge? Please specify (random sequence is fine).

- a. _____
- b. _____
- c. _____
- d. _____
- e. _____
- f. _____
- g. _____
- h. _____

Job Title: __General Manager_____

Company: _____X_____ Country: __Hong Kong

Department: __Branch Sales Dept_____

Experience in this field: __over 10_____ years

Thank you very much for your participation!

Appendix 16 Questionnaire 3 (File#: CX_QN_3)

Are you involved in the following activities?

In this questionnaire, knowledge means explicit knowledge, that is, it is systematic, and can be communicated and shared with others, such as documents, software etc.

- | | | | | |
|---|--------|-----|----|-----|
| <ul style="list-style-type: none"> ▪ Recognizing the need for new knowledge to perform certain tasks in the organization | Y | Yes | No | N/A |
| <ul style="list-style-type: none"> ▪ Defining and justifying the importance to acquire new knowledge to upper management | Y | Yes | No | N/A |
| <ul style="list-style-type: none"> ▪ Defining possible solutions to obtain new knowledge required | Y | Yes | No | N/A |
| <ul style="list-style-type: none"> ▪ Identifying possible sources of knowledge required | Y
Y | Yes | No | N/A |
| <ul style="list-style-type: none"> ▪ Screening these possible sources | | Yes | No | N/A |
| <ul style="list-style-type: none"> ▪ Which sources will you likely to choose, supposing you can obtain the same new knowledge required from them? Please rank by number. | | | | |
| <div style="margin-left: 20px;">__2__ Upper managers</div> | | | | |
| <div style="margin-left: 20px;">__3__ Peers</div> | | | | |
| <div style="margin-left: 20px;">__4__ Lower managers</div> | | | | |
| <div style="margin-left: 20px;">__8__ Competitors</div> | | | | |
| <div style="margin-left: 20px;">__1__ Publicly available sources (newspaper, radio, magazines, and etc.)</div> | | | | |
| <div style="margin-left: 20px;">__7__ Authorities</div> | | | | |
| <div style="margin-left: 20px;">__6__ Relatives</div> | | | | |
| <div style="margin-left: 20px;">__5__ Friends</div> | | | | |
| <ul style="list-style-type: none"> ▪ Suggesting and prioritizing various methods to acquire new knowledge to upper managers | Y | Yes | No | N/A |
| <ul style="list-style-type: none"> ▪ Evaluating the merits of proposals to acquire new knowledge required | Y | Yes | No | N/A |

▪ Identifying the specific persons or sources possessing the knowledge required as well as those who will get these new knowledge	N	Yes	No	N/A
(to make it clear, we call those person or sources from where to get the knowledge as senders, and those who will get the acquired knowledge as recipients in the later part of this questionnaire)	N	Yes	No	N/A
▪ Creating channels to let recipients contact senders	Y	Yes	No	N/A
▪ Facilitating communication and understanding between senders and recipients	A	Yes	No	N/A
▪ Harmonizing differences among senders and recipients	Y	Yes	No	N/A
▪ Modifying acquired knowledge according to the conditions of recipients	N	Yes	No	N/A
▪ Integrating the knowledge newly acquired with knowledge existing within the organization	Y	Yes	No	N/A
▪ Relaxing regulations and procedures to encourage absorbing new knowledge	Y	Yes	No	N/A
▪ Finding out the problems associated with knowledge integration	Y	Yes	No	N/A
▪ Helping recipients in solving the emerging problems in the process of absorbing new knowledge	N	Yes	No	N/A
▪ Embedding the newly acquired knowledge in organizational daily processes and operations	Y	Yes	No	N/A
▪ Ensure integrated knowledge supporting organization objects	Y	Yes	No	N/A
▪ Communicating with upper managers for potential conflicts between the new organizational processes and operations and strategic intend	Y	Yes	No	N/A
▪ Communicating with lower managers to find out difficulty for the action of new organizational processes and operations	Y	Yes	No	N/A
▪ Preparing contingency plan				

- Are you involved in any other activities during the process of transferring new knowledge? Please specify (random sequence is fine).

a.

b. _

c. _

d. _

e. _

f. _____

g. _____

h. _____

Job Title: __Product Manager_____

Company: __X_____ Country: __Canada_____

Department:
____Product&Marketing_____

Experience in this field: __5_____ years

Thank you very much for your participation!

Appendix 17 Questionnaire 4 (File#: CX_QN_4)

Are you involved in the following activities?

In this questionnaire, knowledge means explicit knowledge, that is, it is systematic, and can be communicated and shared with others, such as documents, software etc.

- | | | | | |
|---|---|-----|----|-----|
| ▪ Recognizing the need for new knowledge to perform certain tasks in the organization | Y | Yes | No | N/A |
| ▪ Defining and justifying the importance to acquire new knowledge to upper management | Y | Yes | No | N/A |
| ▪ Defining possible solutions to obtain new knowledge required | Y | Yes | No | N/A |
| ▪ Identifying possible sources of knowledge required | Y | Yes | No | N/A |
| ▪ Screening these possible sources | Y | Yes | No | N/A |
| ▪ Which sources will you likely to choose, supposing you can obtain the same new knowledge required from them? Please rank by number. | | | | |
| _____ Upper managers | | | | |
| ___1___ Peers | | | | |
| _____ Lower managers | | | | |
| ___3___ Competitors | | | | |
| _____ Publicly available sources (newspaper, radio, magazines, and etc.) | | | | |
| _____ Authorities | | | | |
| _____ Relatives | | | | |
| ___2___ Friends | | | | |
| ▪ Suggesting and prioritizing various methods to acquire new knowledge to upper managers | Y | Yes | No | N/A |
| ▪ Evaluating the merits of proposals to acquire new knowledge required | Y | Yes | No | N/A |

<ul style="list-style-type: none"> Identifying the specific persons or sources possessing the knowledge required as well as those who will get these new knowledge 	Y	Yes	No	N/A
(to make it clear, we call those person or sources from where to get the knowledge as senders, and those who will get the acquired knowledge as recipients in the later part of this questionnaire)		Yes	No	N/A
<ul style="list-style-type: none"> Creating channels to let recipients contact senders 	A	Yes	No	N/A
<ul style="list-style-type: none"> Facilitating communication and understanding between senders and recipients 	Y			
<ul style="list-style-type: none"> Harmonizing differences among senders and recipients 	Y	Yes	No	N/A
<ul style="list-style-type: none"> Modifying acquired knowledge according to the conditions of recipients 	Y	Yes	No	N/A
<ul style="list-style-type: none"> Integrating the knowledge newly acquired with knowledge existing within the organization 	Y	Yes	No	N/A
<ul style="list-style-type: none"> Relaxing regulations and procedures to encourage absorbing new knowledge 	A	Yes	No	N/A
<ul style="list-style-type: none"> Finding out the problems associated with knowledge integration 	Y	Yes	No	N/A
	Y	Yes	No	N/A
<ul style="list-style-type: none"> Helping recipients in solving the emerging problems in the process of absorbing new knowledge 				
<ul style="list-style-type: none"> Embedding the newly acquired knowledge in organizational daily processes and operations 	Y	Yes	No	N/A
<ul style="list-style-type: none"> Ensure integrated knowledge supporting organization objects 	Y	Yes	No	N/A
<ul style="list-style-type: none"> Communicating with upper managers for potential conflicts between the new organizational processes and operations and strategic intend 	A	Yes	No	N/A
	A	Yes	No	N/A
<ul style="list-style-type: none"> Communicating with lower managers to find out difficulty for the action of new organizational processes and operations 				
<ul style="list-style-type: none"> Preparing contingency plan 	A	Yes	No	N/A

- Are you involved in any other activities during the process of transferring new knowledge? Please specify (random sequence is fine).

a.

b. _

c. _

d. _

e. _

f. _____

g. _____

h. _____

Job Title: ___ World wide business manager _____

Company: ___X_____ Country: _Canada_____

Department:
_____Product&Marketing_____

Experience in this field: ___15_____ years

Thank you very much for your participation!

Appendix 18 Questionnaire 5 (File#: CX_QN_5)

Are you involved in the following activities?

In this questionnaire, knowledge means explicit knowledge, that is, it is systematic, and can be communicated and shared with others, such as documents, software etc.

- | | | | | |
|---|---|-----|----|-----|
| ▪ Recognizing the need for new knowledge to perform certain tasks in the organization | Y | Yes | No | N/A |
| ▪ Defining and justifying the importance to acquire new knowledge to upper management | Y | Yes | No | N/A |
| ▪ Defining possible solutions to obtain new knowledge required | Y | Yes | No | N/A |
| ▪ Identifying possible sources of knowledge required | Y | Yes | No | N/A |
| ▪ Screening these possible sources | | Yes | No | N/A |
| <p>▪ Which sources will you likely to choose, supposing you can obtain the same new knowledge required from them? Please rank by number.</p> <p>__8__ Upper managers</p> <p>__5__ Peers</p> <p>__7__ Lower managers</p> <p>__6__ Competitors</p> <p>__1__ Publicly available sources (newspaper, radio, magazines, and etc.)</p> <p>__2__ Authorities</p> <p>__4__ Relatives</p> <p>__3__ Friends</p> | | | | |
| ▪ Suggesting and prioritizing various methods to acquire new knowledge to upper managers | Y | Yes | No | N/A |
| ▪ Evaluating the merits of proposals to acquire new knowledge required | Y | Yes | No | N/A |

▪ Identifying the specific persons or sources possessing the knowledge required as well as those who will get these new knowledge	Y	Yes	No	N/A
(to make it clear, we call those person or sources from where to get the knowledge as senders, and those who will get the acquired knowledge as recipients in the later part of this questionnaire)		Yes	No	N/A
▪ Creating channels to let recipients contact senders	Y	Yes	No	N/A
▪ Facilitating communication and understanding between senders and recipients	Y			
▪ Harmonizing differences among senders and recipients	Y	Yes	No	N/A
▪ Modifying acquired knowledge according to the conditions of recipients	Y	Yes	No	N/A
▪ Integrating the knowledge newly acquired with knowledge existing within the organization	Y	Yes	No	N/A
▪ Relaxing regulations and procedures to encourage absorbing new knowledge	Y	Yes	No	N/A
▪ Finding out the problems associated with knowledge integration	Y	Yes	No	N/A
▪ Helping recipients in solving the emerging problems in the process of absorbing new knowledge	Y	Yes	No	N/A
▪ Embedding the newly acquired knowledge in organizational daily processes and operations	Y	Yes	No	N/A
▪ Ensure integrated knowledge supporting organization objects	Y	Yes	No	N/A
▪ Communicating with upper managers for potential conflicts between the new organizational processes and operations and strategic intend	Y	Yes	No	N/A
▪ Communicating with lower managers to find out difficulty for the action of new organizational processes and operations	Y	Yes	No	N/A
▪ Preparing contingency plan	Y	Yes	No	N/A

- Are you involved in any other activities during the process of transferring new knowledge? Please specify (random sequence is fine).
 - a. Getting the new knowledge required from outside. ____
 - b. Finding out the possibility in my work.
 - c. Thinking how to integrate available knowledge. ____
 - d. Trying by myself and lower managers. _____
 - e. Suggesting to upper managers. _____
 - f. _____
 - g. _____
 - h. _____

Job Title: ____ Group Sales Manager _____

Company: ____X____ Country: ____China____

Department: _____ Export Sales _____

Experience in this field: ____8____ years

Thank you very much for your participation!

Appendix 19 Questionnaire 6 (File#: CX_QN_6)

Are you involved in the following activities?

In this questionnaire, knowledge means explicit knowledge, that is, it is systematic, and can be communicated and shared with others, such as documents, software etc.

- | | | | | |
|---|--------|-----|----|-----|
| <ul style="list-style-type: none"> ▪ Recognizing the need for new knowledge to perform certain tasks in the organization | Y | Yes | No | N/A |
| <ul style="list-style-type: none"> ▪ Defining and justifying the importance to acquire a new knowledge to upper management | | Yes | No | N/A |
| <ul style="list-style-type: none"> ▪ Defining possible solutions to obtain new knowledge required | Y | Yes | No | N/A |
| <ul style="list-style-type: none"> ▪ Identifying possible sources of knowledge required | Y
Y | Yes | No | N/A |
| <ul style="list-style-type: none"> ▪ Screening these possible sources | | Yes | No | N/A |
| <ul style="list-style-type: none"> ▪ Which sources will you likely to choose, supposing you can obtain the same new knowledge required from them? Please rank by number. | | | | |
| <div style="margin-left: 20px;">__2__ Upper managers</div> | | | | |
| <div style="margin-left: 20px;">__3__ Peers</div> | | | | |
| <div style="margin-left: 20px;">__4__ Lower managers</div> | | | | |
| <div style="margin-left: 20px;">__8__ Competitors</div> | | | | |
| <div style="margin-left: 20px;">__1__ Publicly available sources (newspaper, radio, magazines, and etc.)</div> | | | | |
| <div style="margin-left: 20px;">__7__ Authorities</div> | | | | |
| <div style="margin-left: 20px;">__6__ Relatives</div> | | | | |
| <div style="margin-left: 20px;">__5__ Friends</div> | | | | |
| <ul style="list-style-type: none"> ▪ Suggesting and prioritizing various methods to acquire new knowledge to upper managers | Y | Yes | No | N/A |
| <ul style="list-style-type: none"> ▪ Evaluating the merits of proposals to acquire new knowledge required | Y | Yes | No | N/A |

▪ Identifying the specific persons or sources possessing the knowledge required as well as those who will get these new knowledge	a	Yes	No	N/A
(to make it clear, we call those person or sources from where to get the knowledge as senders, and those who will get the acquired knowledge as recipients in the later part of this questionnaire)	N	Yes	No	N/A
▪ Creating channels to let recipients contact senders	Y	Yes	No	N/A
▪ Facilitating communication and understanding between senders and recipients	A	Yes	No	N/A
▪ Harmonizing differences among senders and recipients	Y	Yes	No	N/A
▪ Modifying acquired knowledge according to the conditions of recipients	N	Yes	No	N/A
▪ Integrating the knowledge newly acquired with knowledge existing within the organization	a	Yes	No	N/A
▪ Relaxing regulations and procedures to encourage absorbing new knowledge	Y	Yes	No	N/A
▪ Finding out the problems associated with knowledge integration	Y	Yes	No	N/A
▪ Helping recipients in solving the emerging problems in the process of absorbing new knowledge	y	Yes	No	N/A
▪ Embedding the newly acquired knowledge in organizational daily processes and operations	a	Yes	No	N/A
▪ Ensure integrated knowledge supporting organization objects	Y	Yes	No	N/A
▪ Communicating with upper managers for potential conflicts between the new organizational processes and operations and strategic intend	A	Yes	No	N/A
▪ Communicating with lower managers to find out difficulty for the action of new organizational processes and operations	A	Yes	No	N/A
▪ Preparing contingency plan				

- Are you involved in any other activities during the process of transferring new knowledge? Please specify (random sequence is fine).

a. Special training, eg, S.I.P.

b. _Abroad working experience

c. _

d. _

e. _

f. _____

g. _____

h. _____

Job Title: __World wide business manager_____

Company: __X_____ Country: _Canada_____

Department:
____Product&Marketing_____

Experience in this field: __6_____ years

Thank you very much for your participation!

Appendix 20 Questionnaire 7 (File#: CY_QN_1)

Are you involved in the following activities?

In this questionnaire, knowledge means explicit knowledge, that is, it is systematic, and can be communicated and shared with others, such as documents, software etc.

- | | | | |
|---|-----|----|-----|
| ▪ Recognizing the need for new knowledge to perform certain tasks in the organization | Yes | No | N/A |
| ▪ Defining and justifying the importance to acquire new knowledge to upper management | Yes | No | N/A |
| ▪ Defining possible solutions to obtain new knowledge required | Yes | No | N/A |
| ▪ Identifying possible sources of knowledge required | Yes | No | N/A |
| ▪ Screening these possible sources | Yes | No | N/A |
| ▪ Which sources will you likely to choose, supposing you can obtain the same new knowledge required from them? Please rank by number. | | | |
| ___3___ Upper managers | | | |
| ___4___ Peers | | | |
| ___5___ Lower managers | | | |
| ___6___ Competitors | | | |
| ___2___ Publicly available sources (newspaper, radio, magazines, and etc.) | | | |
| ___1___ Authorities | | | |
| ___8___ Relatives | | | |
| ___7___ Friends | | | |
| ▪ Suggesting and prioritizing various methods to acquire new knowledge to upper managers | Yes | No | N/A |
| ▪ Evaluating the merits of proposals to acquire new knowledge required | Yes | No | N/A |

<ul style="list-style-type: none"> Identifying the specific persons or sources possessing the knowledge required as well as those who will get these new knowledge 	Yes	No	N/A
<p>(to make it clear, we call those person or sources from where to get the knowledge as senders, and those who will get the acquired knowledge as recipients in the later part of this questionnaire)</p>	Yes	No	N/A
<ul style="list-style-type: none"> Creating channels to let recipients contact senders 	Yes	No	N/A
<ul style="list-style-type: none"> Facilitating communication and understanding between senders and recipients 	Yes	No	N/A
<ul style="list-style-type: none"> Harmonizing differences among senders and recipients 	Yes	No	N/A
<ul style="list-style-type: none"> Modifying acquired knowledge according to the conditions of recipients 	Yes	No	N/A
<ul style="list-style-type: none"> Integrating the knowledge newly acquired with knowledge existing within the organization 	Yes	No	N/A
<ul style="list-style-type: none"> Relaxing regulations and procedures to encourage absorbing new knowledge 	Yes	No	N/A
<ul style="list-style-type: none"> Finding out the problems associated with knowledge integration 	Yes	No	N/A
<ul style="list-style-type: none"> Helping recipients in solving the emerging problems in the process of absorbing new knowledge 	Yes	No	N/A
<ul style="list-style-type: none"> Embedding the newly acquired knowledge in organizational daily processes and operations 	Yes	No	N/A
<ul style="list-style-type: none"> Ensure integrated knowledge supporting organization objects 	Yes	No	N/A
<ul style="list-style-type: none"> Communicating with upper managers for potential conflicts between the new organizational processes and operations and strategic intend 	Yes	No	N/A
<ul style="list-style-type: none"> Communicating with lower managers to find out difficulty for the action of new organizational processes and operations 	Yes	No	N/A
<ul style="list-style-type: none"> Preparing contingency plan 	Yes	No	N/A

- Are you involved in any other activities during the process of transferring new knowledge? Please specify (random sequence is fine).

- a. _____
- b. _____
- c. _____
- d. _____
- e. _____
- f. _____
- g. _____
- h. _____

Job Title: _____Product Manager_____

Company: _____Y_____ Country: _____China_____

Department: _____Marketing_____

Experience in this field: _____5_____ years

Thank you very much for your participation!

Appendix 21 Questionnaire 8 (File#: CY_QN_2)

Are you involved in the following activities?

In this questionnaire, knowledge means explicit knowledge, that is, it is systematic, and can be communicated and shared with others, such as documents, software etc.

- | | | | |
|--|------------|----|-----|
| ▪ Recognizing the need for new knowledge to perform certain tasks in the organization | Yes | No | N/A |
| ▪ Defining and justifying the importance to acquire new knowledge to upper management | Yes | No | N/A |
| ▪ Defining possible solutions to obtain new knowledge required | Yes | No | N/A |
| ▪ Identifying possible sources of knowledge required | Yes | No | N/A |
| ▪ Screening these possible sources | Yes | No | N/A |
| <p>▪ Which sources will you likely to choose, supposing you can obtain the same new knowledge required from them? Please rank by number.</p> <p>__5_ Upper managers</p> <p>__1_ Peers</p> <p>__2_ Lower managers</p> <p>__4_ Competitors</p> <p>__3 Publicly available sources (newspaper, radio, magazines, and etc.)</p> <p>__6_ Authorities</p> <p>____ Relatives</p> <p>____ Friends</p> | | | |
| ▪ Suggesting and prioritizing various methods to acquire new knowledge to upper managers | Yes | No | N/A |
| ▪ Evaluating the merits of proposals to acquire new knowledge required | Yes | No | N/A |

<ul style="list-style-type: none"> Identifying the specific persons or sources possessing the knowledge required as well as those who will get these new knowledge 	Yes	No	N/A
<p>(to make it clear, we call those person or sources from where to get the knowledge as senders, and those who will get the acquired knowledge as recipients in the later part of this questionnaire)</p>	Yes	No	N/A
<ul style="list-style-type: none"> Creating channels to let recipients contact senders 	Yes	No	N/A
<ul style="list-style-type: none"> Facilitating communication and understanding between senders and recipients 	Yes	No	N/A
<ul style="list-style-type: none"> Harmonizing differences among senders and recipients 	Yes	No	N/A
<ul style="list-style-type: none"> Modifying acquired knowledge according to the conditions of recipients 	Yes	No	N/A
<ul style="list-style-type: none"> Integrating the knowledge newly acquired with knowledge existing within the organization 	Yes	No	N/A
<ul style="list-style-type: none"> Relaxing regulations and procedures to encourage absorbing new knowledge 	Yes	No	N/A
<ul style="list-style-type: none"> Finding out the problems associated with knowledge integration 	Yes	No	N/A
<ul style="list-style-type: none"> Helping recipients in solving the emerging problems in the process of absorbing new knowledge 	Yes	No	N/A
<ul style="list-style-type: none"> Embedding the newly acquired knowledge in organizational daily processes and operations 	Yes	No	N/A
<ul style="list-style-type: none"> Ensure integrated knowledge supporting organization objects 	Yes	No	N/A
<ul style="list-style-type: none"> Communicating with upper managers for potential conflicts between the new organizational processes and operations and strategic intend 	Yes	No	N/A
<ul style="list-style-type: none"> Communicating with lower managers to find out difficulty for the action of new organizational processes and operations 	Yes	No	N/A
<ul style="list-style-type: none"> Preparing contingency plan 	Yes	No	N/A

- Are you involved in any other activities during the process of transferring new knowledge? Please specify (random sequence is fine).

- a. _____
- b. _____
- c. _____
- d. _____
- e. _____
- f. _____
- g. _____
- h. _____

Job Title: _____Project Release/Quality Manager

Company: _____Y_____ Country: _____USA_____

Department: _____R&D_____

Experience in this field: _____8__ years

Thank you very much for your participation!

Appendix 22 Questionnaire 9 (File#: CY_QN_3)

Are you involved in the following activities?

In this questionnaire, knowledge means explicit knowledge, that is, it is systematic, and can be communicated and shared with others, such as documents, software etc.

- | | |
|---|--|
| <ul style="list-style-type: none"> ▪ Recognizing the need for new knowledge to perform certain tasks in the organization ▪ Defining and justifying the importance to acquire new knowledge to upper management ▪ Defining possible solutions to obtain new knowledge required ▪ Identifying possible sources of knowledge required ▪ Screening these possible sources ▪ Which sources will you likely to choose, supposing you can obtain the same new knowledge required from them? Please rank by number. | <p>Yes</p> <p>Yes</p> <p>N/A</p> <p>Yes</p> <p>Yes</p> |
|---|--|
-
- _1___ Upper managers

_2___ Peers

___ Lower managers

___5_ Competitors

___6 Publicly available sources (newspaper, radio, magazines, and etc.)

___ 4 Authorities

___ Relatives

_3___ Friends
-
- | | |
|--|-----------------------|
| <ul style="list-style-type: none"> ▪ Suggesting and prioritizing various methods to acquire new knowledge to upper managers ▪ Evaluating the merits of proposals to acquire new knowledge required | <p>Yes</p> <p>Yes</p> |
|--|-----------------------|

<ul style="list-style-type: none"> Identifying the specific persons or sources possessing the knowledge required as well as those who will get these new knowledge 	Yes
<p>(to make it clear, we call those person or sources from where to get the knowledge as senders, and those who will get the acquired knowledge as recipients in the later part of this questionnaire)</p>	No
<ul style="list-style-type: none"> Creating channels to let recipients contact senders 	Yes
<ul style="list-style-type: none"> Facilitating communication and understanding between senders and recipients 	No
<ul style="list-style-type: none"> Harmonizing differences among senders and recipients 	No
<ul style="list-style-type: none"> Modifying acquired knowledge according to the conditions of recipients 	Yes
<ul style="list-style-type: none"> Integrating the knowledge newly acquired with knowledge existing within the organization 	No
<ul style="list-style-type: none"> Relaxing regulations and procedures to encourage absorbing new knowledge 	Yes
<ul style="list-style-type: none"> Finding out the problems associated with knowledge integration 	Yes
<ul style="list-style-type: none"> Helping recipients in solving the emerging problems in the process of absorbing new knowledge 	Yes
<ul style="list-style-type: none"> Embedding the newly acquired knowledge in organizational daily processes and operations 	Yes
<ul style="list-style-type: none"> Ensure integrated knowledge supporting organization objects 	Yes
<ul style="list-style-type: none"> Communicating with upper managers for potential conflicts between the new organizational processes and operations and strategic intend 	Yes
<ul style="list-style-type: none"> Communicating with lower managers to find out difficulty for the action of new organizational processes and operations 	Yes
<ul style="list-style-type: none"> Preparing contingency plan 	Yes

- Are you involved in any other activities during the process of transferring new knowledge? Please specify (random sequence is fine).

- a. _____
- b. _____
- c. _____
- d. _____
- e. _____
- f. _____
- g. _____
- h. _____

Job Title: _____ General Manager _____

Company: _____ Y _____ Country: _____ USA _____

Department: _____ Sales Force _____

Experience in this field: ____ 13 ____ years

Thank you very much for your participation!

Appendix 23 Interview Record 10 (File#: CY_IV_1)

Date	Time	Sender	Recipient	Message
23/12/2004	11:16:18 PM	Gracia	A	Hi, A
23/12/2004	11:16:29 PM	Gracia	A	Hi, E
23/12/2004	11:16:35 PM	Gracia	A	:)
23/12/2004	11:17:07 PM	A	Gracia	Hi, E :)
23/12/2004	11:17:24 PM	A	Gracia	shall we do it now?
23/12/2004	11:17:31 PM	Gracia	A	it's fine for me, depends on u
23/12/2004	11:17:39 PM	A	Gracia	Ok, now
23/12/2004	11:17:47 PM	Gracia	A	ok
23/12/2004	11:18:02 PM	Gracia	A	how's everythings going there?
23/12/2004	11:19:33 PM	A	Gracia	it's warn foggy weekend today. I came back office alone:(
23/12/2004	11:19:43 PM	Gracia	A	:(
23/12/2004	11:20:07 PM	Gracia	A	but get my accompany now ;)
23/12/2004	11:20:51 PM	A	Gracia	hehe, another boss
23/12/2004	11:21:11 PM	Gracia	A	:faint~~~~~
23/12/2004	11:21:52 PM	A	Gracia	how long does the interview take?
23/12/2004	11:22:37 PM	Gracia	A	Won't be too long, 22 questions
23/12/2004	11:23:53 PM	Gracia	A	do u have scanner?
23/12/2004	11:24:15 PM	A	Gracia	yes.
23/12/2004	11:24:23 PM	Gracia	A	I might need ur signature on an agreement form
23/12/2004	11:25:10 PM	A	Gracia	fine. i can help on this.
23/12/2004	11:26:02 PM			Gracia send C:\Documents and Settings\NYu\Desktop\CONSENT FORM TO PARTICIPATE IN RESEARCH.doc
23/12/2004	11:26:43 PM	Gracia	A	receive it ple~~~~~ase
23/12/2004	11:29:09 PM			□□"CONSENT FORM TO PARTICIPATE IN RESEARCH.doc"□□□
23/12/2004	11:29:13 PM	Gracia	A	Ok, A, please read the consent form first to make sure you agree with the participation of this interview and your right to stop it if u feel uncomfortable with it at any time
23/12/2004	11:33:29 PM	Gracia	A	let me know when u finish, then I can keep on going :)
23/12/2004	11:40:48 PM	A	Gracia	sure
23/12/2004	11:40:49 PM	A	Gracia	reading the content
23/12/2004	11:41:03 PM	Gracia	A	ok, go ahead :-#
23/12/2004	11:43:07 PM	A	Gracia	i'm fine with the consent form. should i print it our and sign and email it back to you right now?
23/12/2004	11:43:17 PM	Gracia	A	u can do it later
23/12/2004	11:43:33 PM	A	Gracia	good.
23/12/2004	11:43:37 PM	A	Gracia	next step?
23/12/2004	11:44:55 PM	Gracia	A	ok, let's start it. my research is about the role of middle managers in the process of knowledge management
23/12/2004	11:46:28 PM	Gracia	A	in the following interview, knowledge means explicit knowledge. It means knowledge written in word, such as documents, software and so on
23/12/2004	11:47:12 PM	Gracia	A	anyway, it's written in some systematical way that can be easily communicated and shared with others
23/12/2004	11:47:48 PM	A	Gracia	get it and...
23/12/2004	11:48:24 PM	Gracia	A	the first question is about if u involved in the following activities
23/12/2004	11:48:46 PM	Gracia	A	r you involved in Recognizing the need for new knowledge to perform certain tasks in the organization
23/12/2004	11:52:19 PM	A	Gracia	yes, such as I propose adopting AC Nelson Advisor to learn better about our brands' market share
23/12/2004	11:52:57 PM	Gracia	A	sorry, one additional question, what is AC Nelson Advisor :\$
23/12/2004	11:54:46 PM	A	Gracia	it's a research tool(software in fact) served by AC Nielson Co. to help

study the market share trend and price trend and competition, etc.

23/12/2004 11:55:00 PM Gracia A ic.. so when u recognize the need for new K, u will define and justify the importance to get such K to your upper managers?

23/12/2004 11:56:11 PM A Gracia yes. coz u really need this new K to help us to proceed our work.

23/12/2004 11:56:46 PM Gracia A So as u mentioned before, u will define the possible solutions to obtain such new K as well?

23/12/2004 11:57:35 PM A Gracia yes. normally I go to see the supervisor with the problem and solution.

24/12/2004 12:08:05 AM Gracia A so when u go to c the supervisor, u will prepare possible solution, and all the possible sources to get the new K, yes?

24/12/2004 12:09:42 AM A Gracia yes. but in some case I will seek advice from the supervisor or from other related colleagues.

24/12/2004 12:10:05 AM Gracia A ic, then if u can get the same knowledge from the following sources, which sources will u choose first, please rank them by number:

24/12/2004 12:10:11 AM Gracia A Upper managers___ Peers___ Lower managers___ Competitors___ Publicly available sources (newspaper, radio, magazines, and etc.)___ Authorities___ Relatives___ Friends

24/12/2004 12:12:41 AM A Gracia _5_ Upper managers_3_ Peers_7_ Lower managers_6_ Competitors_2_ Publicly available sources (newspaper, radio, magazines, and etc.)_1_ Authorities_8_ Relatives_4_ Friends

24/12/2004 12:13:03 AM Gracia A thanks

24/12/2004 12:13:05 AM Gracia A is there anything else u will prepare before going to see the supervisor besides the importance, possible solutions and possible sources to get knowledge required?

24/12/2004 12:16:50 AM A Gracia if it's a bigger project or requiring out-sourcing, I'll prepare the estimate cost and maybe timetable as well. in such case, other peers may be invited to propose together.

24/12/2004 12:17:11 AM Gracia A ic

24/12/2004 12:18:56 AM Gracia A So when you go to c ur supervisor, you'll suggest and prioritize various possible solutions to him, y?

24/12/2004 12:20:37 AM A Gracia yes.

24/12/2004 12:22:29 AM Gracia A to make the following questions clear, let me define sth first. The person or places who possess the knowledge required as senders;

24/12/2004 12:22:46 AM Gracia A and those who will get and use the acquired K as recipients

24/12/2004 12:25:56 AM Gracia A Take what you mentioned before about the AC Nelson Advisor as an example, the sender is AC Nelson, those who will need and use the AC Nelson Advisor are recipients. In this way, are you also involved in identifying the senders and recipients?

24/12/2004 12:27:14 AM A Gracia not really. some professional peers may handle / coordinate these.

24/12/2004 12:35:20 AM A Gracia just suggest where to get it, and not really identify who will get it. the boss may take care of the followings.

24/12/2004 12:35:40 AM Gracia A ic

24/12/2004 12:37:20 AM Gracia A so u won't deal with anything about the recipients even when the new K is obtained by your department, won't you?

24/12/2004 12:41:00 AM A Gracia yes, unless my subordinates are recipients.

24/12/2004 12:42:13 AM Gracia A ic, then if ur subordinates are recipients, will u create chennels to let them contact senders?

24/12/2004 12:42:29 AM Gracia A Oops, it should be channels

24/12/2004 12:43:39 AM A Gracia u miss Chenel?:D

24/12/2004 12:43:46 AM Gracia A :\$

24/12/2004 12:43:52 AM A Gracia yes

24/12/2004 12:44:30 AM Gracia A will u help both sides to communicate more and understand each other?

24/12/2004 12:44:48 AM A Gracia yes

24/12/2004 12:45:12 AM Gracia A when there is difference among them, what will u do?

24/12/2004 12:45:44 AM Gracia A such as different culture, different thinking?

24/12/2004 12:48:57 AM A Gracia first, we'll communicate the new K requirement to the senders. then help sender to elaborate to the recipient, better in the recipients' language/culture.

24/12/2004 12:51:24 AM Gracia A ic, it's somewhat related to my next question: after getting the new knowledge required, will you modify it according to the condition of your subordinates, such as their skills, background and so on.

24/12/2004 12:52:08 AM A Gracia the answer is yes.

24/12/2004 12:53:10 AM Gracia A then after obtain it, are u involved in integrating the newly acquired K with knowledge existing within your subordinate, y?

24/12/2004 12:55:35 AM A Gracia yes.

24/12/2004 12:55:42 AM Gracia A will you relax regulations or take some procedures to encourage your subordinate absorbing new knowledge better?

24/12/2004 12:56:58 AM A Gracia i would. but be frankly, it's not the reality. no clear procedure.

24/12/2004 12:57:32 AM Gracia A so the reality is....?

24/12/2004 1:00:40 AM A Gracia we do the new K requirement case by case. not in a formal procedure.

24/12/2004 1:01:54 AM Gracia A ok, the next is,

24/12/2004 1:02:42 AM Gracia A are you involved in Embedding the newly acquired knowledge in organizational daily processes and operations?

24/12/2004 1:04:59 AM A Gracia yes, as one of recipients.

24/12/2004 1:06:05 AM Gracia A when u integrate it, will ensure integrated knowledge supporting organization objects?

24/12/2004 1:09:03 AM A Gracia yes

24/12/2004 1:10:40 AM Gracia A BTW, as for the quesiton "Embedding the newly acquired knowledge in organizational daily processes and operations", do u think it's a function of middle manager? because u said u r involved as a recipient

24/12/2004 1:11:38 AM Gracia A or put it in this way, as a middle manager, what do u do to embed the newly acquired knowledge in organizational daily processes and operations?

24/12/2004 1:14:26 AM A Gracia yes. i consider it as the middle manager's responsibility. using the new K in the daily operation to help problem solve.

24/12/2004 1:14:40 AM Gracia A ok

24/12/2004 1:16:11 AM Gracia A do u communicate with your supervisor for potential conflicts between the new organizational process (if there is any change to the process after the K integration) and operations/ strategic intend?

24/12/2004 1:18:59 AM A Gracia yes.

24/12/2004 1:19:03 AM Gracia A do u communicate with lower managers to find out difficulty for the action of new organizational processes?

24/12/2004 1:20:05 AM A Gracia yes

24/12/2004 1:20:43 AM Gracia A will you also help your subordinate to solve the emerge problems in the process of absorbing new knowledge?

24/12/2004 1:26:21 AM A Gracia y

24/12/2004 1:26:31 AM Gracia A do you prepare any contingency plan?

24/12/2004 1:27:32 AM A Gracia Seldom not

24/12/2004 1:27:50 AM Gracia A Are you involved in any other activities during the process of transferring new knowledge?

12/02/2005 1:31:14 AM A Gracia yes, training, sharing, evaluation, etc.

12/02/2005 1:31:26 AM Gracia A ok..... some personnal questions:
Job Title: _____ Company: _____
Country: _____
Department: _____ Experience in this field: _____ years
Job Title: _____ Brand _____
Manager _____ Company: _____
Y _____ Country: _____ P. R. China

12/02/2005 1:33:17 AM A Gracia _____ Department: _____
Marketing _____ Experience in this field: 6 years

12/02/2005 1:33:40 AM Gracia A Thanks a lot~~~~~

12/02/2005 1:35:12 AM A Gracia don't mention it lah. actually i'm tied with my calculating work.

12/02/2005 1:35:35 AM A Gracia i'll scan the consent form to u later via email lah

12/02/2005 1:36:04 AM	Gracia	A	thank you (K)
12/02/2005 1:36:11 AM	A	Gracia	but u'd better give me a non-hotmail address. the file may be big
12/02/2005 1:38:19 AM	Gracia	A	don't worry, my hotmail box is 2G. but sent to li_thesis@yahoo.com
			also, because I often lost mail in Hotmail one
12/02/2005 1:50:48 AM	Gracia	A	ok, I won't bother u now :-#
12/02/2005 1:50:59 AM	Gracia	A	ok, go ahead with your work, no accompany = no bother :P
12/02/2005 1:51:11 AM	Gracia	A	have a good rest!!!!
12/02/2005 1:51:54 AM	A	Gracia	;)ciao
12/02/2005 1:52:06 AM	Gracia	A	ciao~~~~~

Appendix 24 Interview Record 11 (File#: CY_IV_2)

Date	Time	Sender	Recipient	Message
3/2/2005	9:17:44 AM	(6)	My new cell.	Morning :-)
3/2/2005	9:17:46 AM	My new cell.	(6)	Hi
3/2/2005	9:18:20 AM	(6)	My new cell.	ok, let's start
3/2/2005	9:18:24 AM	My new cell.	(6)	can we ?
3/2/2005	9:18:39 AM	(6)	My new cell.	the interview is about knowledge management
3/2/2005	9:19:05 AM	My new cell.	(6)	ok.
3/2/2005	9:19:19 AM	(6)	My new cell.	i'll make sth clear first
3/2/2005	9:19:35 AM	My new cell.	(6)	what's for, this interview?
3/2/2005	9:19:40 AM	(6)	My new cell.	in the following interview, knowledge means explicit knowledge, that is, it is systematic, and can be communicated and shared with others, such as documents, software etc.
3/2/2005	9:20:02 AM	My new cell.	(6)	I c.
3/2/2005	9:20:11 AM	(6)	My new cell.	sure, because it's important to make it clear to continue
3/2/2005	9:21:07 AM	(6)	My new cell.	ok, first question is r u involved in the activity of recognizing the need for new knowledge to perform certain tasks in the organization
3/2/2005	9:21:53 AM	My new cell.	(6)	Yes, I do. On daily basis actually.
3/2/2005	9:23:00 AM	(6)	My new cell.	ok, then after u recognize the need for new knowledge, what will you do to initiate the process to get it?
3/2/2005	9:26:14 AM	My new cell.	(6)	usually, according to experience, to find its most possible source. such as some info I need to get from business partners, such as suppliers, accountants or consultants. Most of them are from outside. Also certain portion of the cases, I will talk with my superior to find suggestion.
3/2/2005	9:27:19 AM	(6)	My new cell.	u mentioned possible source, normally what kind of source will u look for?
3/2/2005	9:29:23 AM	My new cell.	(6)	from inside when the knowledge relating business secret or specific relating to the company; from outside, public media, special consultants or insiders when the knowledge is regarding to something across the border.
3/2/2005	9:30:38 AM	(6)	My new cell.	ok, then if the following source can give u the same knowledge required, what's your priority for them?
3/2/2005	9:30:52 AM	(6)	My new cell.	Upper managers ____ Peers ____ Lower managers ____ Competitors ____ Publicly available sources (newspaper, radio, magazines, and etc.) ____ Authorities ____ Relatives ____ Friends
3/2/2005	9:32:13 AM	My new cell.	(6)	to save time, peers, lower managers, friends, authorities, Publicly available sources, relatives and competitors
3/2/2005	9:32:40 AM	(6)	My new cell.	ok, thanks
3/2/2005	9:33:30 AM	(6)	My new cell.	is defining possible solutions your responsibility for initiate the process?
3/2/2005	9:33:39 AM	(6)	My new cell.	initiating

Date	Time	Sender	Recipient	Message
3/2/2005	9:34:36 AM	My new cell.	(6)	could specific ur question?
3/2/2005	9:34:59 AM	(6)	My new cell.	will u define possible solutions to get the knowledge required?
3/2/2005	9:37:14 AM	My new cell.	(6)	most of the case, the knowledge required has close answer. Sometime, it is an open one. In business practise, i will try to filter the best one available within a time frame. To make it simple, whichever is available and convincable.
3/2/2005	9:38:25 AM	(6)	My new cell.	ic
3/2/2005	9:40:33 AM	(6)	My new cell.	before starting to get the new knowledge, do u need to define the importance of the knoweldge transfer to upper manager?
3/2/2005	9:41:23 AM	My new cell.	(6)	yes. to get support from upper manager is essential to field knowledge.
3/2/2005	9:41:49 AM	My new cell.	(6)	like others said, communication is the key.
3/2/2005	9:41:58 AM	(6)	My new cell.	:)
3/2/2005	9:43:37 AM	(6)	My new cell.	then after you design your proposal and get support from the upper manger, do u need to identify specific sources to get the knowledge as well as those within the organization who will use the new knowledge?
3/2/2005	9:47:24 AM	My new cell.	(6)	sure, as i said, in business practise, i have to find an answer within a time frame. Any source available and anyone willing to accept the knowledge transfer will be contacted first. Later, roll on to others. i can't keep searching for a perfect choice.
3/2/2005	9:48:14 AM	(6)	My new cell.	ic
3/2/2005	9:48:25 AM	(6)	My new cell.	to make it simple, i'll call the person or place where u get the new knowledge as senders, and the person who will use it as recipients
3/2/2005	9:49:02 AM	My new cell.	(6)	right.
3/2/2005	9:49:35 AM	My new cell.	(6)	tackle the easiest one first strategy.
3/2/2005	9:50:03 AM	(6)	My new cell.	after your identification of both senders and recipients, will you do anything to enhance their communication?
3/2/2005	9:51:04 AM	(6)	My new cell.	or say, to help them connect to one another?
3/2/2005	9:51:57 AM	My new cell.	(6)	that is very understood but very challenging indeed.
3/2/2005	9:52:20 AM	(6)	My new cell.	do u think it's your responsibility to do so?
3/2/2005	9:52:31 AM	My new cell.	(6)	first step, you have to build up a concensus what will be benefit for two.
3/2/2005	9:52:40 AM	(6)	My new cell.	y
3/2/2005	9:54:08 AM	My new cell.	(6)	we have first responsibility rule in the company. And as an initiator, I have to make sure it works out as planed. As a hub, as an interpretor, or envoy.
3/2/2005	9:54:34 AM	(6)	My new cell.	y
3/2/2005	9:55:09 AM	(6)	My new cell.	do u still have second step?
3/2/2005	9:55:42 AM	(6)	My new cell.	as u mentioned first step.....just don't want to interrupt your steps :P
3/2/2005	9:57:36 AM	My new cell.	(6)	second step, let them what is the feedback from the other side. something like dialogue. If there is nobody shows interest or response, the conversation will end.

Date	Time	Sender	Recipient	Message
3/2/2005	9:58:05 AM	(6)	My new cell.	ic, then?
3/2/2005	10:01:30 AM	My new cell.	(6)	to draft a timetable, to give this knowledge tranfer an end day. No ending means no result. In an accetable period, finalize the transfer and review it. Inform both parties what are the strong and short points.
3/2/2005	10:02:14 AM	(6)	My new cell.	ok
3/2/2005	10:02:59 AM	(6)	My new cell.	anything else?
3/2/2005	10:03:15 AM	My new cell.	(6)	any other question?
3/2/2005	10:03:20 AM	(6)	My new cell.	y
3/2/2005	10:03:25 AM	(6)	My new cell.	:D
3/2/2005	10:04:12 AM	(6)	My new cell.	after you get the new knoledge, r u involved in modify it according to the conditions of the recipient?
3/2/2005	10:05:57 AM	My new cell.	(6)	well, tough question, actually I don't modify it at very beginning. As new knowledge, maybe I have no idea how to modify it either. I will try its original form, and alter it later if necessary.
3/2/2005	10:06:15 AM	(6)	My new cell.	ok, ic
3/2/2005	10:07:21 AM	(6)	My new cell.	will you relax regulations or procedures to facilitate the start of absorbing the new knowledge?
3/2/2005	10:10:17 AM	My new cell.	(6)	only if there is no other choice. regulation is part of the culture of a company. To make severe change is dangerous in a well-established company.
3/2/2005	10:10:38 AM	(6)	My new cell.	ic
3/2/2005	10:11:12 AM	(6)	My new cell.	but u'll help to integrate the acquired knowledge with existing one, yes?
3/2/2005	10:12:20 AM	My new cell.	(6)	for sure. otherwise, I won't initial the transfer.
3/2/2005	10:12:35 AM	(6)	My new cell.	:)
3/2/2005	10:14:02 AM	(6)	My new cell.	during this process, do u need to identify problems associate with the integration as well as helping the recipients to solve the emerging problem?
3/2/2005	10:14:26 AM	My new cell.	(6)	yes.
3/2/2005	10:15:35 AM	(6)	My new cell.	normally, r u involved in embedding the newly acquired knowledge in organizational processes and routines ?
3/2/2005	10:17:04 AM	My new cell.	(6)	I will put this as part of my routines.
3/2/2005	10:17:19 AM	(6)	My new cell.	ic
3/2/2005	10:17:53 AM	(6)	My new cell.	will you monitor knowledge institutionalization activities to ensure that they support organization objects
3/2/2005	10:18:58 AM	My new cell.	(6)	yes
3/2/2005	10:19:35 AM	(6)	My new cell.	ok
3/2/2005	10:21:06 AM	(6)	My new cell.	during the integration process, do u need to communicate with your upper managers for potential conflicts between new structures or action plans with new knowledge integrated and strategic intend
3/2/2005	10:21:10 AM	My new cell.	(6)	can we stop today? i am tired.
3/2/2005	10:21:17 AM	(6)	My new cell.	two more questions
3/2/2005	10:23:01 AM	My new cell.	(6)	The communication will be in infomal occasion. The plan on knowledge transfer will analys the pro and

Date	Time	Sender	Recipient	Message
				con before starts. The potential conflict is quite possible but I will avoid it.
3/2/2005	10:23:02 AM	(6)	My new cell.	but if u really want to stop, we can do it tomorrow. it's up to u
3/2/2005	10:23:15 AM	(6)	My new cell.	ic
3/2/2005	10:23:19 AM	(6)	My new cell.	how about lower managers?
3/2/2005	10:23:31 AM	My new cell.	(6)	2morrow, sweetie. i have appointment this afternoon.
3/2/2005	10:24:06 AM	(6)	My new cell.	but only two questions, ok, ok, as u wish
3/2/2005	10:24:27 AM	My new cell.	(6)	I start to be bad now. :P
3/2/2005	10:25:13 AM	(6)	My new cell.	:)
3/2/2005	10:25:15 AM	My new cell.	(6)	afterward, i need some incentive.
3/2/2005	10:26:12 AM	(6)	My new cell.	have more sleep
3/2/2005	10:26:22 AM	My new cell.	(6)	gb.
3/2/2005	10:27:44 AM	My new cell.	(6)	-)
3/3/2005	9:05:26 AM	(6)	My new cell.	:)
3/3/2005	9:06:40 AM	(6)	My new cell.	i'm ready, waiting for u
3/3/2005	9:29:35 AM	My new cell.	(6)	:P
3/3/2005	9:30:23 AM	(6)	My new cell.	yesterday we stopped at communicate with upper managers for potential conflicts
3/3/2005	9:30:36 AM	My new cell.	(6)	right
3/3/2005	9:30:47 AM	(6)	My new cell.	how about lower managers?
3/3/2005	9:33:19 AM	(6)	My new cell.	how about middle managers? do u need to communicate with them about difficulty for the action of new process and operations with new K integrated?
3/3/2005	9:36:09 AM	My new cell.	(6)	Sure, usually the barrier comes from lower and middle managers. They share the same decision power and they will judge the reform from their own domain. To find an alley and to illustrate the benefit will gain break through in the process of knowledge transfer.
3/3/2005	9:36:32 AM	(6)	My new cell.	ic
3/3/2005	9:36:51 AM	(6)	My new cell.	do u need to prepare contingency plan?
3/3/2005	9:38:57 AM	(6)	My new cell.	□: do u need to prepare contingency plan?
3/3/2005	9:39:18 AM	(6)	My new cell.	i was kicked out automatically, so send it again to make sure u got it
3/3/2005	9:40:05 AM	My new cell.	(6)	good question. to estimate the possible outcome, to prepare for the worst scenario are always necessary. when prepare contingency plan, you can let your upper manager know you have thoroughly analyzed the pros and cons and will be willing to support you if you do need help.
3/3/2005	9:40:38 AM	(6)	My new cell.	y
3/3/2005	9:40:52 AM	My new cell.	(6)	meanwhile, your team will response quickly enough to fix those problem even you were not available.
3/3/2005	9:41:38 AM	(6)	My new cell.	is there any other activities u r involved in the whole process of knowledge transfer?
3/3/2005	9:44:37 AM	My new	(6)	yes, I did had some experience, acting as a super

Date	Time	Sender	Recipient	Message
		cell.		user going through the process of the knowledge transfer of other division. I mean, I involved in the knowledge transfer proecess in which I were not the sender or the recipient, but as a witness or outside advisor.
3/3/2005 9:45:58 AM		My new cell.	(6)	in such case, I have no benefit or risk relating to this process,I will provide more neutral idea while I gain experence at the same time.
3/3/2005 9:46:53 AM		(6)	My new cell.	ic
3/3/2005 9:54:02 AM		(6)	My new cell.	did u get it?
3/3/2005 9:54:16 AM		My new cell.	(6)	sorry I was on a phone.
3/3/2005 9:54:26 AM		My new cell.	(6)	ok, finally some personal questions
				_____ Company:
				_____ Country:
3/3/2005 9:54:39 AM		(6)	My new cell.	_____ Department:
				_____ Experience in this field: _____
				years
3/3/2005 9:55:24 AM		My new cell.	(6)	strategic product manager, Company Y,
3/3/2005 9:58:57 AM		My new cell.	(6)	US, Marketing , 12 years
3/3/2005 9:59:52 AM		(6)	My new cell.	ok, thanks:)
3/3/2005 10:01:08 AM		(6)	My new cell.	here is the questionnair
3/3/2005 10:01:54 AM		(6)	My new cell.	please fill in it, send it back to me along with the consent form
3/3/2005 10:02:09 AM		My new cell.	(6)	ok.
3/3/2005 10:03:23 AM		(6)	My new cell.	Thanks for your participation. Have a good rest~~~
3/3/2005 10:03:37 AM		My new cell.	(6)	Ok, 8
3/3/2005 10:03:47 AM		(6)	My new cell.	8