

**SUCCESS FACTORS DRIVING  
INTRA-ORGANIZATIONAL KNOWLEDGE TRANSFER**

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## **DEDICATION**

To

*My mother with greatest love and affection.*

*Her love, joy, wisdom, gentle and caring spirit have graced my life....*

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## **ABSTRAK**

Pemindahan pengetahuan merupakan satu aktiviti utama bagi sesebuah organisasi demi mengekalkan keberkesanannya. Dengan memahami faktor yang membantu process pemindahan pengetahuan, ia menjadi satu alat dalam penciptaan serta pemindahan pengetahuan di kalangan pekerja. Oleh itu, pengurus juga dapat memperkenalkan strategi demi kejayaan organisasi serta mengekalkan prestasi yang terbaik. Tinjauan tentang faktor-faktor yang mendorong kejayaan pemindahan pengetahuan dalam sesebuah organisasi, dari segi keberkesanannya telah dilakukan. Tinjauan soal selidik telah dihantar kepada organisasi-organisasi di Kuala Lumpur dan Pulau Pinang. Sejumlah 169 maklum balas dapat digunakan untuk kajian ini. Regresi berganda digunakan untuk mengenalpasti hubungan tersebut. Faktor-faktor yang dikaji termasuk ciri-ciri pengetahuan, penerima pengetahuan dan konteks pemindahan. Hasil kajian menunjukkan bahawa kandungan pengetahuan dan budaya belajar berkaitan secara positif dengan kejayaan pemindahan pengetahuan manakala perbezaan pengetahuan dan perbezaan amalan berkaitan secara negatif dengan kejayaan pemindahan pengetahuan. Walau bagaimanapun, tiada kesan didapati dalam hubungan saiz projek dan perbezaan jarak dengan jayanya pemindahan pengetahuan.

## **ABSTRACT**

Knowledge transfer (KT) has become an important activity for an organization to sustain its effectiveness. By understanding the factors, it will help organizations to use knowledge transfer as a tool to create and distribute knowledge among their employees. Consequently, it will assist managers to implement strategies in boosting organizational success, and to sustain superior performance. This research was undertaken to study the success factors driving the knowledge transfer within an organization, in terms of its effectiveness. Survey questionnaires were sent out to the organizations in Kuala Lumpur and Penang. A total of 169 usable responses were collected for this study. Multiple regression was conducted on the data to confirm the relationship. Factors in terms of knowledge characteristics, recipient of knowledge and transfer context were diligently studied. The results reveal that knowledge embeddedness and recipient's learning culture are positively correlated with knowledge transfer success whereas knowledge distance and norm distance are negatively correlated. However, project size and physical distance have no significant impact on knowledge transfer.

## **Chapter 1**

### **INTRODUCTION**

In recent years, many organizations have found that knowledge is an essential asset for them to survive on increasingly competitive fast markets. In order to compete in the globalization environment, a company success should not be linked only to tangible assets, such as factories, cash, inventories but they should also concentrate on intangible resources like knowledge. A good and established company should not ignore its knowledge usage for company growth, how they make use of its people knowledge is a key to sustain their competitive advantage. The ability of a given unit to learn and to be able to transfer its learning to different unit is vital, especially given the rapidly changing environment of today (Thompson, Gentner & Loewenstein, 2000).

Gartner Group described knowledge management as “a discipline that promotes an integrated application to identifying, managing, and sharing all of an enterprise’s information needs” (Lee, 2000). Companies that can convert knowledge in the heads of their employees and customers (human capital) into actual capabilities (structural capital) and relationships (relationship capital) are the ones that will lead the way. To lead the way, knowledge transfer, a key processes in knowledge management plays significant role to achieve the goal. The benefit of leveraging and transferring knowledge has been commonly discussed at numerous conferences. Its importance is not an issue to a company, yet it is so difficult to apply.

Despite an increased interest in knowledge management and hence knowledge transfer mechanisms, little empirical research has actually been performed on such knowledge transfer, particularly from the viewpoints of the individuals who share knowledge. We have little research on why employees share knowledge and even less

research on what the effects of this knowledge-sharing session are on the employees. In some organizations, participation in knowledge management tools/processes is not mandated. In others, it may be mandated but is not part of the employee's core responsibilities. Consequently, this study seeks to understand what the obstacles are of knowledge transfer and to examine the factors that drive the knowledge transfer in medium and international companies. By understanding the factors, it will help company to establish an effective knowledge transfer and also assist managers to implement strategies to boost organizational efficiency through better knowledge management.

### **1.1 Towards Knowledge-based Organization**

Knowledge transfer always links with organizational knowledge. In fact, numerous authors have pointed to knowledge as an organization's best sustainable source of competitive advantage (Drucker, 1988; Nonaka, 1991; Morey & Frangioso, 1997; Zwass, 1999; Argote & Ingram, 2000; Argote, Ingram, Levine, & Moreland, 2000; Davenport & Prusak, 2000; Lahti & Beyerlein, 2000; Rulke, Zaheer & Anderson, 2000). Recent academic and popular media attention on organizational knowledge creation, capture, and transfer attest to a widespread acceptance of this idea (Davenport, DeLong, & Beers, 1998; Marchand & Davenport, 2000). Indeed, Kogut and Zander (1993) emphasized that the organizations' ability to transfer knowledge more effectively and efficiently than the market is in the intra-corporate context explains the primary reason for their existence.

Organizational knowledge, in the context of business, refers to companywide collective knowledge of its product, services, processes, markets, and customers. Organizational knowledge is created, stored, disseminated and reused throughout the

organization. It is embedded in the company's products, services and its business processes. (Lee, 1997).

Lyles and Schwenk (1992) introduce organizational knowledge structure as shared beliefs at the organizational level about "... goals, cause-and-effect beliefs, and other cognitive elements." An attraction of their discussion is that they are quite explicit that inside firms, there exists a differentiation in the degree to which consensus exist with respect to these beliefs. They also argue that the organizational knowledge structure is characterized by complexity which refers to "... the amount of information ... within a knowledge structure" and "... the degree to which cognitive units are interrelated", as well as by relatedness which refers to the degree of coupling (tight vs. loose) between elements in the core and periphery of knowledge structures.

Within organization, the need for continuous access to knowledge has spurred the development of various knowledge initiatives. People search for knowledge because they expect it to help them succeed in their work. The elaboration on this type of knowledge marketplaces has been based largely on the work (Davenport & Prusak, 1998). Moreover, individual's knowledge may not necessarily represent organizational knowledge. When individual knowledge is not registered, used, or shared with others, it ends at the individual level. (Argyris & Schon, 1978).

Organizational knowledge creation, however, is a key factor for continuous innovation (Dougherty, and Hardy, 1996), meaningful organizational learning, and developing core competency and intellectual capital (Quinn, Anderson & Finkelstein, 1996). Knowledge-based view of the firm perceives organizations as knowledge-creating entities, and it suggests that organizational capabilities to create and utilize knowledge are the most important sources of competitive advantage. (Prahalad & Hamel, 1990). The original idea behind the knowledge-based view of the firm is that

"the central competitive dimension of what firms know how to do is to create and transfer knowledge efficiently within an organizational context" (Kogut & Zander 1992: 384).

There are three modes of knowledge that are pertinent for shaping organizational capabilities (Lee, 1996):

1. Know-what pertains to factual knowledge that activities required to complete a task, it's the information needed in order to take a decision and it's the things that need to collect together before making something.
2. Know-how pertains to procedural knowledge that is the processes, procedures, techniques and tools used to get something done.
3. Know-why. It is axiomatic knowledge and this aspect explicitly includes knowledge of the reasons and axiomatic assumptions underlying work practices in organizations. It also relates to strategic insight – understanding the context of role, and the value of actions. It's the 'big picture' view of things.

Spender summarizes the different types of organizational knowledge in the following matrix. (Spender, 1993)

	<b>Individual</b>	<b>Social</b>
<i>Explicit</i>	Conscious	Objectified
<i>Implicit</i>	Automatic	Collective

Figure 1.1 Types of organizational knowledge

**Conscious knowledge** is that which can be reported explicitly by the individual members.

**Automatic knowledge** is that which they bring to the creation of practice but are unable to report. Thus, to quote Polanyi (1967), individuals know more than they can say and manifest that knowledge through their actions.

**Objectified knowledge** is that which is wholly explicit and diffused through the organization. Its archetype is scientific knowledge, but it might also be more localized in, for instance, the company's rules and operating guidelines.

Management in the strategic sense will move from managing physical resources to managing knowledge (Quintas, Lefrere & Jones, 1997). While this will still involve managing people, the emphasis will switch from managing the task people perform, to managing their knowledge inputs and outputs. Critical components of knowledge management will include (Alan Burton-Jones, 2001):

1. Developing more accurate, comprehensive, and up-to-date information systems, reflecting 'hard' information, 'soft' or opinionative information, and contextualized information about the firm's activities and its knowledge resources
2. Evaluating and comparing the level of knowledge in the firm with its internal needs, market demand, and the knowledge profile of its competitors

3. Protecting and retaining key knowledge, via physical and logical security mechanisms and by appropriate incentives and rewards for people
4. Assisting knowledge transfer through directives, routines, and operating procedures
5. Developing cross-functional teams to facilitate knowledge exchange, integration, and innovation
6. Developing training and research programs, both in the firm and with external agencies, to enhance the knowledge capital of the firm and to instill a 'knowledge-valuing culture'
7. Developing measurement and control systems to evaluate the success of knowledge management strategies, both within the organization and as reflected in the organization's market performance

## **1.2 Problem Statement**

As Malaysia aspires to become a developed country by the year 2020, it is vital for the nation to transform itself from Production Based Economy (P-Economy) into Knowledge Based Economy (K-Economy). New value created through resourceful application of knowledge is a key for Malaysia organizations to meet the challenge of globalization. As K-Economy evolves further, the intangible economy grows bigger in size relative to the tangible economy.

Seeing on the importance of knowledge, studying on knowledge transfer that is one of the widely used strategies by an organization is essential and cannot be disregarded. Organizations use this strategy to maintain their competitive advantage and sustain its long-term organization effectiveness, in terms of quality, cost and profit. Furthermore, the utilization of knowledge synergizes the company to a higher level especially through productivity growth.

Currently, some researchers may have studied on technology transfer in R&D but not from the knowledge perspective. Organization still encounters problems on how to implement knowledge transfer among its employees. As such, this research is carried out to study the success factors driving intra-organizational knowledge transfer. The research also intends to assess the organization effectiveness in relations to knowledge transfer.

### **1.3 Research Objectives**

The objective of this research is to identify success factors that driving intra-organizational knowledge transfer in one organization. Prior identifying the factors, it will touch base on the importance and benefit gained of internal knowledge transfer within an organization. This basic understanding is useful as it serves as a foundation and guideline before we know the factors in detail. The main research seeks to identify the success factors that drive intra-organizational knowledge transfer in one organization. Empirical findings will be done on these success factors.

### **1.4 Research Questions**

Guided by the above objectives, this study addresses the following specific questions, brief discussion are done for question (1) and (2) whereas the most concentration is on question (3):

1. How internal knowledge transfer plays its importance within an organization?
2. What are the benefits gained through knowledge transfer?
3. What are the key factors that facilitate and drive the success of internal knowledge transfer?

### **1.5 Scope of Research**

This research will be conducted on companies in the Federal Territory – Kuala Lumpur and Penang, and it includes manufacturing and service industries. This research project is primarily concerned with the factors that drive the success of knowledge transfer within an organization. It is intended that the propositions and the framework developed are useful in sustaining its long-term organization effectiveness.

There are a number of factors that determine the success of intra-organizational knowledge transfer. They are in knowledge context (embeddedness and articulability), recipient context (project size and learning culture), and relational context (physical distance, knowledge distance and norm distance), which are independent variables. Knowledge transfer success will be the dependent variable.

### **1.6 Significance of Study**

An overall observation of the literature indicated that there is a lack of empirical research on knowledge transfer in Malaysia and the drivers that lead to the successful of knowledge transfer. Therefore, this study finds out what are the success factors that driving the knowledge transfer in an organization and its influence on organization effectiveness. Hopefully, the results from this study can be used as a better understanding of knowledge transfer practise in an organization, providing valuable information and guidance toward its effectiveness through intra-organizational knowledge transfer.

## **1.7 Definition of Key Terms**

The following concise definitions represent the key terms used in this study. They are provided to clarify the study.

### ***Absorptive capacity***

Absorptive capacity determines the ability of subsidiary staff to understand and apply the knowledge resource. Low absorptive capacity means staff have little existing knowledge, while high absorptive capacity indicates that have good existing knowledge that they can use to recombine with new knowledge to apply to problems.

### ***Knowledge Management***

A systematic and integrative process of coordinating organization-wide activities of acquiring, creating, storing, sharing, diffusing, developing, and deploying knowledge by individuals and groups in pursuit of major organizational goals. It is the process through which organizations create and use their institutional and collective knowledge. (Rastogi, 2000).

### ***Knowledge Management Practice***

Can be broadly defined as ‘the acquisition, sharing and use of knowledge with organizations, including learning process and information system’. The emerging field of Knowledge Management seems to reflect a constellation of changes – some profound, some more cosmetic – in the business environment.

### ***Explicit Knowledge***

One of the two types of knowledge, explicit knowledge can be expressed in formal and systematic language and shared in the forms of data, scientific formulas, specifications, manuals and such. It can be processed, transmitted, codified, articulated and stored relatively easily.

### ***Tacit Knowledge***

One of the two types of knowledge, tacit knowledge is highly personal and hard to formalize. It is deeply rooted in action, procedures, routines, commitment, ideals, values and emotions. It is difficult to communicate tacit knowledge to others, as it is an analogue process that requires a kind of ‘simultaneous processing’.

### ***Organizational Culture***

A social environment that drives an organization’s formal and informal expectations of individuals, defines the types of people who will fit into the organization, shapes individuals’ freedoms to pursue action without prior approval, and affects how people interact with others both inside and outside the organization. (Gupta & Govindarajan, 2000).

### ***Cultural factors***

Values, norms, and practices that define behavior within an organizations (De Long, 2000). For purpose of this study, the following characteristics are considered cultural factors: information systems, organizational structure, reward systems, processes, people, and organizational leadership. (Gupta & Govindarajan, 2000).

## **1.8 Organization of Report**

This report is organized into five chapters. Chapter 1, the current chapter introduces the problem of the research and discusses its context. Chapter 2 will touch on general review of knowledge management, the related literature, in particular to knowledge transfer. This is followed by a discussion of the theoretical framework, design of the study and methodological procedures in Chapter 3. The research hypotheses will be tested and the findings of the study are presented in Chapter 4. Finally, the managerial implications and the conclusion of this research are drawn in Chapter 5.

## Chapter 2

### LITERATURE REVIEW

#### 2.1 Introduction

In recent years, knowledge management researches have received widespread attention. A lot of people have studied the importance of knowledge management towards the organization. One practitioner said: “We used to say knowledge is power. Now we say sharing is power” (Pederson, 1998).

In this chapter, a thorough literature survey of the following topics will be discussed:

- (a). A general overview of knowledge management
- (b). Research on knowledge transfer
- (c). An overview of the importance of internal knowledge transfer within an organization
- (d). Factors driving the success of intra-organizational knowledge transfer

#### 2.2 Knowledge Management

##### 2.2.1 *Knowledge*

Knowledge is a fluid mix of framed experience, values, contextual information, and expert insight that provides a framework for evaluating and incorporating new experiences and information. It originates and is applied in the minds of knowers (Davenport & Prusak, 2000).

Pertaining to the knowledge, the following terms are elaborated in more detail:

1. **Data** are defined as any signals that can be sent by an originator to a recipient – human and otherwise, it is discrete content and does not make much sense by itself.

2. **Information** is defined as processed and collected data that are intelligible to the recipient.
3. **Knowledge** is defined as the cumulative stock of information and skills derived from use of information by the recipient. Where the recipient is a human being, knowledge thus reflects the processing (thinking and cognition) by brain of the 'raw material' supplied in the form of information. Two simple thumb rules that differentiate information and knowledge are:
  - a. Information can be person independent. Knowledge is highly person specific.
  - b. Knowledge is always contextual. It can never ever be interpreted or used without understanding its context. (Ganesh & Sandhya, 2001)
4. **Knowledge assets** refer to the accumulated intellectual resources of organization. It is the knowledge possessed by organization and its employees (staff) in the form of information, ideas, learning, understanding, memory, insights, cognitive and technical skills, and capabilities. Employees (staff), software, patents, databases, documents, guides, policies and procedures, and technical drawings are repositories of an organization's knowledge assets. Knowledge assets are held not only by an organization, but resides within its customers (patients), suppliers, and partners as well. (Baldrige Criteria, 2003).
5. There are two types of knowledge (Nonaka, 2000) that are explicit and tacit knowledge. Explicit knowledge represents only the tip of the iceberg of the entire body of knowledge, then that 80% of the iceberg that lies underwater remained largely ignored by a narrow focus on explicit knowledge. (Goldblatt, 2000)

### 2.2.2 Evolution of Knowledge Management

A brief history of knowledge management also can be described as below (Professor Holden, 2002).

Period	Orientation
Initiation	<ul style="list-style-type: none"> <li>• Early human beings shared their brains, emotions and intuitions – for a collective of purpose. From growing of crops, hunting of animals, making of clothes and dwellings, prediction of weather, navigation, the development of myths and religious beliefs, warfare, trade relations, writing systems and literature, engineering feats, scientific thought and practice (Ancient Greece and Ancient China).</li> </ul>
Roman Empire	<ul style="list-style-type: none"> <li>• The great written religions, printing, the Renaissance, the Reformation, the Age of Discovery, the Industrial Revolution ... and the railways.</li> </ul>
1960s	<ul style="list-style-type: none"> <li>• Machlup and Drucker, knowledge-producing economy (post-industrial society)</li> </ul>
1970s	<ul style="list-style-type: none"> <li>• Researchers at Stanford and MIT study information and technology transfer, growing recognition of knowledge as an organizational resource (artificial intelligence, expert system, computer translation etc)</li> </ul>
1980s	<ul style="list-style-type: none"> <li>• Knowledge is recognized as a competitive asset, but this had no place in classic economic theory; firms – except possibly Japanese ones – lacked strategies for managing knowledge</li> </ul>
1990s	<ul style="list-style-type: none"> <li>• Link is made between knowledge management (more than just database management) and organizational learning</li> <li>• Knowledge management activities were flourishing, thanks in part to the Internet</li> <li>• The International Knowledge Management Network (IKMN) begun in Europe in 1989, went online in 1994 and was soon joined by the US based Knowledge Management Forum and other KM-related groups and publications</li> </ul>
1990s end and future trend	<ul style="list-style-type: none"> <li>• Social learning, organizational sense-making, system innovation and change management</li> <li>• Bio-economy might be the next stage trend</li> </ul>

Figure 2.1 Evolution of knowledge management

### **2.2.3 Knowledge Management Processes**

The Business Process Resource Centre at Warwick sees knowledge management (KM) practices as a ‘crucial element of the global business process’ within organization and a major source of competitive advantage.

The task of knowledge management is a continuous process and cannot be said to be fully managed. One reason that knowledge management never ends is that the categories of required knowledge are always changing. New technologies, management approaches, regulatory issues and customer concerns are always emerging.

The key processes associated with knowledge management are:

1. Knowledge creation
2. Knowledge acquisition
3. Knowledge organization/storage
4. Knowledge distribution
5. Knowledge application

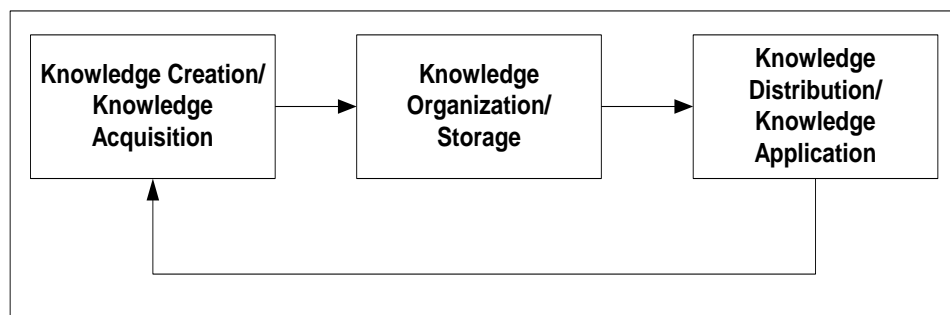


Figure 2.2 Knowledge management process

### ***Knowledge Creation/Identification***

Based on Nonaka and Takeuchi's SECI process, there are four modes of knowledge conversion:

1. **Socialization (from tacit to tacit)** – Sharing experiences and thereby creating tacit knowledge (e.g. apprentice master relationship, where craftsmanship is learned not through language, but through observation, imitation and practice). The key to acquiring tacit knowledge is shared experience.
2. **Externalization (from tacit to explicit)** – Articulating tacit knowledge into explicit concepts (i.e. documenting knowledge). Making tacit knowledge explicit is a key criterion in the knowledge creation process. Runs into problems when specific skills cannot be documented or processes are purposely based on old traditions and methods.
3. **Combination (from explicit to explicit)** - Systemizing concepts into a knowledge system; new knowledge can be created by combining different forms of explicit knowledge (e.g. files, graphics, databases, paper documents, meetings, telephone conversations, etc.) and reconfiguring existing information through sorting, adding, combining and categorizing.
4. **Internalization (from explicit to tacit)** - Embodying explicit knowledge into tacit knowledge; it is closely related to "learning by doing", when socialized, externalized and combined knowledge is internalized into employees tacit knowledge bases (e.g. as shared mental models or technical know-how), it becomes a valuable asset.

### ***Knowledge Acquisition***

It is the process of acquiring knowledge that is available somewhere. For organization, it might entail capturing knowledge from existing documents. It could mean capturing tacit knowledge of its people into its repositories. New knowledge is typically acquired by reading, listening to someone, observing, experiencing events or thinking (John, 2002). If the organization could not develop knowledge, it might identify external sources e.g. customers, suppliers, competitors and partners in co-operative ventures, or market intelligence so that this knowledge can be purchased/imported (Ganesh & Sandhya, 2001). Research findings indicate that knowledge acquisition is positively correlated with knowledge exploitation for competitive advantage (Yli-Renko et al, 2001). Hence, organization should move forward in a purposeful manner in hopes of capturing knowledge with the potential for exploitation.

### ***Knowledge Organization/Storage***

It is the process of storing both knowledge and information, often in documentary form. A common feature is “added value” through categorization and pruning. Repositories can fall into three categories (Jennifer, 1999):

1. Those which include external knowledge, such as competitive intelligence;
2. Those that include structured internal knowledge, such as research reports, and product oriented marketing material as techniques and methods;
3. Those that embrace informal, internal or tacit knowledge, such as discussion databases that store “know-how”.

### ***Knowledge Distribution***

It is one of the most essential parts in the knowledge management process and looks at getting the right knowledge to the right place at the right time, i.e. what should be distributed to whom, when and how. The sharing and dissemination of knowledge within an organization are prerequisites for turning isolated expertise and information into something of use to the whole organization. Also, idea will be kept alive, not just an archive and tangible if possible. According to Rastogi (2000), searching and sharing of knowledge are major parts of knowledge management that stimulates organizational learning, innovation, competencies and capabilities. To foster it happens, it depends on the individual and collective brainpower of individuals within the organization via knowledge transfer mechanisms and idea sharing.

### ***Knowledge Application***

It is the process of applying the created and captured knowledge. Pfeffer and Sutton (2000) argue that competitive advantage goes not to the organization who have the best knowledge, but to those who applies knowledge best. Unless the final step of applying knowledge in real world business activity is achieved, all of the preceding phases of knowledge management are in vain. It is hypothesized that the application of knowledge to organizational technologies and processes aids in producing a competitive advantage (Gupta & McDaniel, 2002). Learning from knowledge application leads to managerial learning regarding what knowledge initiatives actually produced tangible business results. It is difficult and often neglected by organization, but it is very important to maintain the wellspring of knowledge (Parikh, 2001).

### **2.3 Knowledge Transfer**

Knowledge transfer in organization is the process through which one unit (e.g., group, department, or division) is affected by the experience of another. It implies successful transmission of resources from one organization to another, in that the organization accumulates or assimilates new knowledge (Zander, 1991). Gupta and Govindarajan (2000) have conceptualized knowledge transfer (knowledge flows in their terminology) in terms of five elements:

1. Perceived value of the source unit's knowledge;
2. Motivational disposition of the source (i.e., their willingness to share knowledge);
3. Existence and richness of transmission channels;
4. Motivational disposition of the receiving unit (i.e., their willingness to acquire knowledge from the source);
5. The absorptive capacity of the receiving unit, defined as the ability not only to acquire and assimilate but also to use knowledge.

Gilbert and Cordey-Hayes (1996) develop a model of knowledge transfer and discuss it in terms of the learning organization and the process of innovation. They proposed that knowledge transfer is a dynamic process and researched the organizational factors that contribute or inhibit learning. They noted from their results that "time is an implicit factor in the transfer of knowledge from the individual to the organization" (Gilbert & Cordey-Hayes, 1996, p. 309) and that the knowledge must be of mutual benefit (to the organization and the individual).

Szulanski (1996) defined a four-staged process to describe the transfer of best practice inside the organization; the four-stage process is summarized below:

1. **Initiation:** comprises all events that lead to the decision to transfer. Once the need and a potential solution to that need are identified, the feasibility of the transfer is explored.
2. **Implementation:** begins with the decision to proceed. During this stage, resources flow between the recipient and the source. Implementation related activities cease or at least diminish after the recipient begins using the transferred knowledge.
3. **Ramp-up:** begins when the recipient starts using the transferred knowledge, which occurs after the first day of use. The recipient is likely to use the new knowledge effectively at first, but gradually improves performance, ramping up toward a satisfactory level.
4. **Integration:** begins after the recipient achieves satisfactory results with the transferred knowledge. New practices become institutionalized and progressively lose their novelty and become part of the objective, taken-for-granted reality of the organization.

Work on knowledge transfer has focused on networks and collaborative ventures in high technology industries. This is more to technology transfer that may bring knowledge into the organization through the research results, and the collaborative research relationships facilitate its successful transfer and use. Also, it is argued that knowledge transfer will be successful only if an organization has not only the ability to acquire but also the ability to assimilate and apply ideas, knowledge, devices and artifacts effectively.

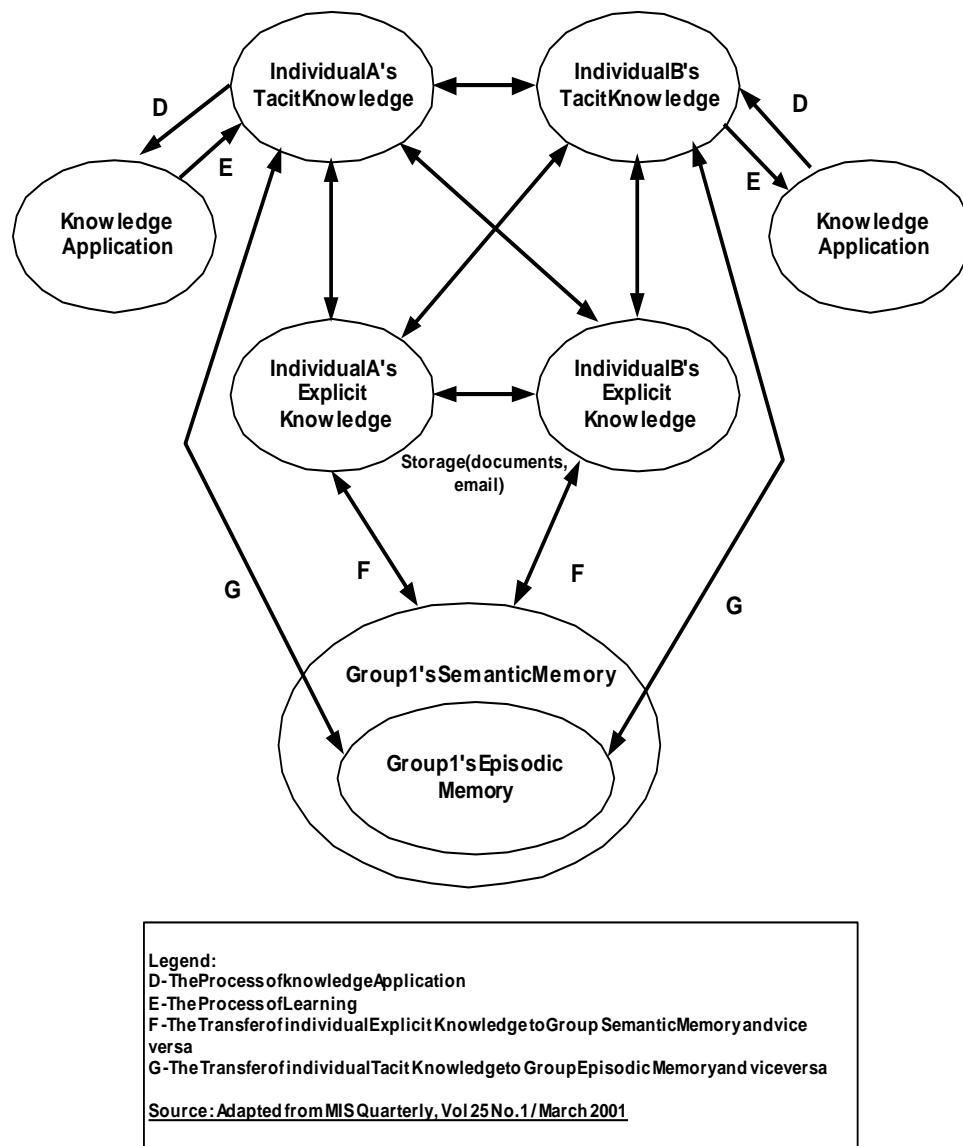


Figure 2.3 Knowledge transfer among individual

Figure 2.3 depicts how the knowledge transfers among individuals in a group. Transfer occurs at various levels: transfer of knowledge between individuals, from individuals to explicit sources, from individual to groups, between groups, across groups, and from the group to the organization. Furthermore, international transfer of knowledge can generally occur in three modes.

1. Transfer can occur between two units of the same organization (Bresman, Birkinshaw & Nobel, 1999).

2. Transfer can occur in various forms of partnership, such as alliances, joint ventures, and licensing arrangements (Simonin, 1999).
3. Transfer can occur through a pure market transaction between two independent organizations (Massingham & Gregory, 2002).

Knowledge transfer depends on how easily that knowledge can be transported, interpreted, and absorbed (Hamel, et al; 1989). Knowledge transfer in international business is also complicated by geography and cultural distance.

This paper research is solely on intra-organizational knowledge transfer meaning that it is done between two units of the same organization, e.g. between subsidiaries, departments in one organization.

### ***2.3.1 Importance of Internal Knowledge Transfer within an Organization***

As Lew Platt, former CEO of Hewlett-Packard (HP), once put it “If only HP knew what HP knows, we would be three times more productive!”. The large size of many enterprises, their global reach, the importance of knowledge to competitiveness, the distributed nature of competence within the firm and the availability of tools to assist knowledge transfer has sharpened the competitive importance of accomplishing knowledge transfer inside the firm. (Teece, 2000). With the trend of globalization, we understand that knowledge transfer’s importance has grown in recent decades. Three main reasons are specified below:

1. Knowledge appears to be an increasing proportion of many organizations’ total assets;
2. Organizations have moved away from hierarchical methods of control toward more decentralized organizational structures and increased employee involvement (Levine, 1995.). This has resulted in more

creativity by frontline employees and subunits, but fewer obvious organizational paths through which the transfer can occur;

3. Advances in information technology have created new means of knowledge transfer. Innovations such as Lotus Notes, the Internet, and intranets all hold the potential for increased diffusion of innovations. However, technology alone cannot solve the problem of knowledge transfer; organizational structures and practices must facilitate and motivate transfers.

Furthermore, it was observed in the KPMG survey that failing to convert individual knowledge, knowledge transfer and know-how into corporate knowledge could lead to problems such as (KPMG, 1998)

1. Knowledge of best practice being lost;
2. Relationships with key client/supplier being damaged;
3. Information vital to the running of the business being lost and ultimately significant business may be lost.

### ***2.3.2 Process of Intra-organizational Knowledge Transfer***

Knowledge transfer is seen as a process (not a one-time act) in which an organization recreates a complex, causally ambiguous set of routines in new settings and keeps it functioning. The knowledge transfer process is described as relational and interdependent, certainly under heavy structural guidance, but with scope for considerable strategic action from both parties. (Sjoholt, 2001). Overall, knowledge transfer can be described in five steps that are idea creation, sharing, evaluation,

dissemination, and adoption. These stages often overlap, are combined, or are skipped; they also have important feedbacks. (Levine, David & April Gilbert, 2001)

### ***2.3.3 Benefit Gained through Knowledge Transfer***

Knowledge transfer is only valuable when it is integrated into a set of policies for knowledge generation and capture. Indeed, the notion that knowledge transfer could represent not only a competitive advantage within a firm but also a less expensive alternative to knowledge creation and acquisition is well documented in economics (Alchian & Demsetz, 1972) and organizational behavior literature (Argote & Ingram, 2000).

As organization consumes material assets, they often decrease in value and quantity. But, when organizations use knowledge resources, these assets tend to increase in that both the provider and receiver are enriched as a result of the transaction (Davenport & Prusak, 2000). This process appears to reduce costs and significantly contribute to overall organizational success by preventing individuals from repeating the mistakes of other individuals (Baum & Ingram, 1998; Gruenfeld, Martorana, & Fan, 2000).

Overall, through knowledge transfer, below are benefits gained (Kermally, 2002):

- (1). Stop organization reinventing the wheel and as a result save time and reduce effort to find knowledge artifacts.
- (2). Speed up decision making processes.
- (3). Provide an effective way of inducing new staff.
- (4). Encourage the use of knowledge and promote collaboration.

- (5). Capture knowledge for organizational use.
- (6). Help trust become gradually institutionalized by collaborating and sharing.
- (7). Encourage the transfer of best practice.
- (8). Promote innovation in processes and products.
- (9). Affect the bottom line – financial or otherwise.

#### ***2.3.4 Potential Barriers to Knowledge Transfer***

The notion of knowledge transfer raises several important research questions that are:

- (1). How can knowledge be effectively transferred among organizational units?
- (2). To what degree does the application of IT to knowledge transfer increase the transfer of knowledge among individuals within a group and between groups?
- (3). What organizational and technical strategies are effective in facilitating knowledge transfer?
- (4). What social, cultural, or technical attributes of organizational settings encourage knowledge transfer by balancing the push and pull processes?
- (5). Does the application of IT to knowledge transfer inadvertently discourage external searches for knowledge?

All of the above questions indirectly become barriers faced in transferring knowledge. Researcher like Simonnin (1999) has investigated and developed a conceptual model of knowledge ambiguity that identifies the seven potential knowledge transfer barriers: tacitness, specificity, complexity, experience, partner protectiveness, cultural distance, and organizational distance.