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Knowledge Transfer: Stories from the Front

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ORGANIZATIONAL KNOWLEDGE

Viewing the firm as a body of knowledge has become central in organizational studies literature. Organizational knowledge plays a role in many organizational research streams, such as the resource-based view of the firm, information technology, organizational design, strategic alliances, international acquisitions and more. Increasingly, organizational research is centered around knowledge-based theories of firms or on using knowledge as a basis for theory. Additionally, practitioner-oriented literature centered around knowledge management and transfer has also grown.

Hedlund and Nonaka (1993) define knowledge as being constructed from “cognitive perceptions as well as skills and expertise embodied in products or services.” They made the distinction between tacit, intuitive, non-verbalized knowledge and explicit, articulated knowledge. Kogut and Zander (1992) also

divided knowledge into two types: information and know-how. Information, or knowing what something means, includes facts, axiomatic propositions, and symbols. To define know-how, they state that it is the accumulated practical skill or expertise that allows one to do something smoothly and efficiently.

Various different views of knowledge and the firm have been proposed, including knowledge as a competency; as the basis for creating competencies by combining knowledge; and as an input for innovation. All knowledge-based approaches to the theory of the firm explain why some firms outperform others, and generally agree that knowledge is socially embedded.

KNOWLEDGE TRANSFER

Knowledge transfer is defined as the process through which one network member is affected by the experience of another (Argote & Ingram, 2000). Firms seeking to maximize the value of knowledge must transfer and share it across the organization. Nelson and Winter argued, "If an existing routine is a success, replication of that success is likely to be desired" (1982). Information and knowledge have a critical role in managing interdependencies, especially in the international arena, where task uncertainty may be very high.

The importance of interdependencies and knowledge flows across organizational units of the Multinational Corporation (MNC) has been recognized and extensively discussed. International learning was defined as the development and sharing of knowledge across national boundaries. Researchers described and empirically proved the superior ability to transfer knowledge at the international level as a primary source for MNC competitive advantage and growth. Knowledge flows enable the transmission of unique solutions from one subunit to another, the coordination of various connected units, and therefore the collaboration among them. For example, the creation of knowledge sharing strategic communities within Xerox was related to enhanced performance. It is only through effective knowledge use and through combining new and existing knowledge that companies can create a best practice.

KNOWLEDGE TACITNESS

Tacit knowledge is highly context specific and has a personal quality, which makes it hard to formalize and communicate. In contrast, explicit, codifiable or articulated knowledge is transmittable in formal, systematic language and may include explicit facts, axiomatic propositions, and symbols.

Skills, such as how to manufacture high precision products, will consist of a combination of both tacit and explicit knowledge. The explicit knowledge that can be expressed in schemata, diagrams, and charts is relatively easy to transfer. Because tacit and explicit knowledge are mutually complementary, there will be a strong tacit dimension associated with how to use and implement explicit knowledge. This tacit dimension is the “glue” that holds together the organizational routines. Tacit knowledge is difficult to transfer and often “sticky”, which means a high incremental cost of transferring the knowledge to a specified location in a form usable by a given party.

TRANSFER MECHANISMS

With every case of knowledge transfer, the question of transfer mechanisms must be answered. Typically with data or processes with limited tacitness, manuals, on-line instruction, short term visits or limited technical training will suffice. Alternatively, knowledge transfers incorporating highly tacit information or processes require more personal contact. Specifically long term visits and personal communication are required to capture nuanced responses from the recipient units. Hence, the fit between the degree of tacitness of the transferred data and the mechanism used is expected to be reflected in transfer

success. The question we ask is, when examining real life knowledge transfer cases will we see a correlation between this fit and the level of success?

THREE CASES

Case 1: Implementing performance management

The case took place in a multinational company attempting to transfer a Performance management practice into its US units thus creating a company-wide HR practice. The strategic goals associated with the knowledge transfer were threefold: First, The Company needed to incorporate an almost paradoxical combination of having a structure similar to one of a holding-company on one hand and a history of family-oriented culture on the other. While the culture was one of flexibility and low accountability, the structure presented an extensive complex multitude of locations, sizes, and goals. Achieving company-wide consistency was viewed by top executives as a way to bridge the gap. Successful transfer of consistent employee development and appraisal across the entire organization was the one of the first corporate attempts of achieving such consistency. It would enable higher levels of accountability as well as a critical common denominator crossing all organizational units.

Secondly, the importance of aligning employee behavior with stakeholders' expectations became evident, and adequate performance management was hoped to allow for better alignment. Thirdly, The Company's executives recognized the need for higher-level employee development coupled with a stronger connection between outputs and rewards. The existing performance evaluation practices across most of the company did not take advantage of tying evaluation with either personal improvement or rewards. Exceptional in these characteristics was the UK-based practice that was implemented across most of The Company's Western European operations.

The short-term goal was thus set to transfer the UK practice to US-based units via the US-based headquarters. The practice first went through a process of turning parts of it into explicit form: Articulation of tacit knowledge and combination of the more explicit. In addition to the written material that was produced as a series of booklets and distributed across the US, a training program was developed. The program involved the short-term travel of UK experienced personnel to teach layers of US executives in the employee evaluation and development practice. The estimation was that lower-level management would

learn both from the training session and from experiencing their own evaluation via their upper-level managers.

Despite more than three years of attempts, the knowledge transfer was only marginally successful. Only two out of nine US units were estimated to effectively implement the transferred practice. The material that was sent to recipient executives was vast and thorough, containing a workable explicit representation of a practice that is mostly tacit. It could be that reading the material would have enabled the executives to implement it, but most of them never got to read it. Few of them had the time to read the hundreds of pages included in the manuals. Most of them didn't see the point in reading the material, and no incentive was set to ensure that they do. The training sessions were few and unpopular, and resulted in patchy implementation of the practice. Table 1 illustrates the lack of fit between the Cognitive, Emotional and Unlearning nature of the knowledge – with the transfer mechanisms used, that lost those specific attributes that were most important in implementing the knowledge. Namely: cognitive and emotional elements.

Case 2: Japanese acquisition as part of a knowledge sharing network

The case is centered in the research division of a Pharmaceutical company. Seven sites around the world take part in the development of compounds, and share information in order to prevent repeating the expensive process of discovery. The sharing process is enabled by a database as well as by monthly discussions, assisting in minimizing internal competition over resources.

Besides maintaining an up-to-date database, knowledge sharing mechanisms include personal-level interactions that take place every ‘once in a while’ on a small scale. Personal acquaintances among personnel from various units are encouraged and preserved regardless of project or other job-related meetings across units. Overall, in order to achieve and maintain healthy flows of knowledge between units, open discussions among personnel from various units and generally between the units is encouraged. Between various units, long-term successful relationships have been the norm, with a regular basis of mutual visits and high levels of trust.

The company acquired a local Japanese pharmaceutical company in an attempt to widen the sharing network of drug development. The Japanese firm needed to learn the practice of knowledge sharing and to implement it, so that the

process remains effective and productive. However, it took about 5 years for this to be successfully accomplished.

To enable the sharing of knowledge from other units with the recipient in a way that could potentially provide immediate, low-cost implementation, the following actions were taken:

- The manager that developed and provided leadership to one of the more innovative best-practitioner units was sent to become the new manager at the recipient for the first few months.
- Regular short-term visits to and from the Japanese unit.
- Longer-term exchange of employees occurred between recipient and other units, for periods of one year.
- After communication problems emerged despite the above efforts, it was discovered that the use of video- and teleconferences could not facilitate mutual understandings, as can face-to-face discussions. For a long period, therefore, important meetings were only made when all involved personnel could be located in the same room. Only later could more distant communications be effective, once levels of acquaintance, trust and mutual culture were achieved.

As can be seen in Table 2, the transfer mechanisms that were used were appropriate for skill-type tacit knowledge or for other non-emotional types such as cause-effect. It seems, however, that while the acquired company possessed most of the technical knowledge required from it, cultural gaps, attitude problems, miscommunications and inability to collaborate were results of inappropriate mechanisms. The knowledge type involved here was highly involved: Human, Emotional, and Unlearning: three types that require closer connection between source and recipient, similar to what we saw in the other Japanese case, case 1 above.

Case 3: Japanese Start-up

The company provides financial services worldwide. It recognized the opportunities presented by the Japanese market. Japan represented both a new market and a gateway to the entire region. Responding to the local needs was perceived as very important, and an assessment is done at the corporate level for fit between the local market and existing systems and products worldwide.

The case focused on a transfer of a best practice from the US unit to the new Japanese Startup. The knowledge transferred was extensive and covered many areas of a unit's operations: from selecting the right local team to training,

establishment of a product line, dealing with local authorities, etc. The company operates mainly as a mediator: coordinating and controlling transactions between outside fund managers and outside distribution agents such as brokers and banks.

There is a strong belief in the Company regarding the importance of hiring the right people for the job. Here they looked for Japanese that were not typical: the aim was to narrow the cultural differences by picking people that started out being closer to the Company profile: open to diversity, non-traditional, willing to share ideas and work together as a team. Their motto is “Hire for attitude, train for skill”. The head of the Japanese unit was educated in the US and lived there for a few years. This reduced most of the language barrier and enabled some cultural alignment. This person was responsible for hiring the rest of the Japanese team.

About 4 months after the initial meetings in Japan, part of the Japanese team came for about 6 months to the US to finalize the product. The Japanese team came to the US with a written report on the Japanese market’s assessment and needs. A few iterations of programming and testing yielded a completed product. During these months the Japanese got an opportunity to be exposed to the way business is done in the US. The organizational culture could penetrate to a certain degree, and better communications could develop as well as trust. One of

the most important themes in the US is “Knowledge is power, but only if you share it”. Various cultural and language problems were encountered along the way, as well as personal and adjustment difficulties for the Japanese team in Japan and in the US.

After returning to Japan, continuous contact was maintained between the US, UK, Stockholm and Japan, where the Japanese were pushed towards the most effective utilization of the transferred knowledge. Leadership is evident both by example during the period of long-term visits, by pushing the source to be their best, and by continuously addressing and solving problems. Periodic meetings occurred every 3-4 months and many phone conversations and e-mails enabled the completion and implementation of the transfer.

Table 3 summarizes the various types of tacit knowledge that was transferred. On one hand, it was important to learn the local Japanese market in order to customize an IT tool that would fit it best. On the other hand, in order for the Japanese unit to work in synergy with the rest of the organization, an intense cultural experience was involved, attempting to bridge a significant cultural (both national and organizational) gap. While some codification practices were used, the transfer relied heavily on long term exposure and training to the cultural and

technological parts of the knowledge. This enabled trust to be developed as well as the necessary social ties to result in a highly satisfactory transfer.

KNOWLEDGE TACITNESS AND TRANSFER MECHANISMS

We expected that tacit knowledge would be more difficult to transfer than explicit knowledge, yielding a more difficult and perhaps less successful transfer. However, this was not the case. Inkpen and Dinur (1998) concluded that certain transfer mechanisms were more effective in transferring tacit knowledge while others were better in transferring explicit knowledge. This investigation supports this precursor result and adds a new finding. It appears that, not only are certain mechanisms better in transferring certain types of knowledge, using the appropriate transfer mechanisms can impact eventfulness

To illustrate, in case 1 the company attempted to transfer highly tacit knowledge using manuals and booklets that explicitly articulated the knowledge. This process produced resistance and eventually failed. Only units that were managed by process participants were successful implementers. Since the source considered the practice relatively simple and the recipients were highly educated (most had PhDs), relying on explicit, written material seemed reasonable.

However, transfer obstacles included both source over-reliance on explicit transferred knowledge and insufficient recipient time and motivation. Moreover, the limited reliance on tacit knowledge transfer mechanisms such as longer term visits and personal communications inhibited the transfer. Thus, the mechanisms used did not fit the type of knowledge to be transferred, contributing to the high eventfulness.

In contrast, in case 3 the knowledge was rather highly tacit, yet it was successful. There was a good fit between the type of knowledge and the mechanisms used, however, which compensated for the knowledge tacitness.

Thus, the distillation of the results demonstrates that, while knowledge tacitness as an explanatory factor for transfer difficulty is not a simple, linear relationship. The fit between knowledge type and transfer mechanisms employed is also a predictor of transfer success.

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Table 1: Case 1: Implementing Performance Management (PM)

What was transferred	Knowledge type	How it was transferred	Comments
A new PM practice	A complex process of employee development. Requires sensitivity and empathy. PM was already taking place in an unsatisfactory way	Manuals Training Limited short-term visits from source to recipient In two distinct cases was transferred through hands-on training by dedicated leaders	The practice was not implemented in most of the organization. Clear lack of fit between tacit knowledge and transfer mechanisms. Implementation was successful only in these two units, where leaders were committed to the success of the transfer.
An ability to accept practices from corporate without changing them	Clashes with employee's needs to reinvent every process they encounter	Manuals	Not addressed or recognized as a separate need.

Table 2: Case 2: Japanese acquisition as part of a knowledge sharing network

What was transferred	Knowledge type	How it was transferred	Comments
Knowledge regarding drug development processes	Developing an ability to create new compounds Highly complex processes on innovation	Short and longer term visitation Long distance communications via phone, video, web Expatriate management	Very few problems occurred in transferring this type of knowledge
The ability to become an integral viable part of a knowledge sharing network	Getting to know people and achieving a level of trust that enables collaboration	Limited scale visitation that expanded somewhat later on	The new unit took long expensive five yours to be considered a viable part of the network.
Integrating organizational culture aspects into the acquired company	The acquired Japanese company had an established, and different, culture that needed to be unlearned	Expatriate leadership Limited scale employee exchange	Cultural clashes were frequent. Japanese attitudinal problems and cultural resistance exceeded professional knowledge gaps.
Operational knowledge from various units	The Japanese needed to overcome resistance to perceived 'orders' as opposed to 'suggestions'	Expatriate leadership Short and longer term visits	Mechanisms allowed for the transfer of more explicit elements but not for emotional-type tacit knowledge

Table 3: Case 3: Japanese Start-Up

What was transferred	Knowledge type	How it was transferred	Comments
Knowledge of the Japanese market	Unclear what the market needs are and what may cause success An extensive amount of complex information	Document	Document was not perfect but was accepted with its limitations. Excessive amount of stress was reported with connection to the seemingly impossible task
Organizational culture and work habit expectations	The Japanese needed to accommodate themselves to the requirements of a significantly different culture by overcoming many emotional barriers and learning attitudes and behavioral codes	Hiring the right kind of people, long-term cultural immersion in US	Reported as extremely difficult for the Japanese but also very successful. 'Boot-camp' style living for 6 months, away from all that is familiar including family members.
Creating work synergy with other subsidiaries	Need to build a network of acquaintances, to know whom to talk to in what circumstance, building trust.	Long term visit in the US. Shorter regular visits at other subsidiaries	
Use of IT-based tool	Require a great deal of practice	Long-term hands-on practice with knowledgeable users	
How to fit IT-based tool to needs of market	Require extensive knowledge of IT tool, with a complex set of options	Long-term hands-on training. Codification.	
Learning how to work with Women managers	Clashes with Japanese customs and beliefs, and is not to be openly discussed		The issue was not addressed as part of the knowledge transferred. Japanese seem to have adapted to the notion of working with women non-Japanese executives.