



The Readiness of Information and Decision Support Center in Egypt to Adopt Knowledge Management

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ABSTRACT

No doubt that creative and innovative people form the core of any organization. Those people build the corporate memory. The Information and Decision Support Center for the Cabinet of Ministers for the Egyptian Government (IDSC) faces a problem of employees' high turn over rate, which threatens IDSC to loose its memory.

One common mistake many organizations make when they implement KM initiative is to place too much emphasis on the technological aspect of KM and ignore the human resources aspects. IDSC developed a knowledge management system called the Organizational Memory <http://www.home.idsc.gov.eg/> but ignored the human factor of KM. The purpose of this paper is to test the readiness of employees and managers working at IDSC to adopt knowledge. The paper also will attempt to answer different questions; What are the employee perceptions of sharing of knowledge?; What are the impediments to share knowledge at IDSC?; Is the privacy of employee information an issue at IDSC?; What are the difficulties in managing knowledge at IDSC?; Does IDSC maintain innovation and creativity in its problem solving approach given the availability of the knowledge base?; Does conflict arise between an employee's career ambitions and the knowledge management culture of an organization?

BACKGROUND

Over the last two years Knowledge Management has become the latest hot topic in the businesses world. Companies are realizing that their competitive edge is mostly the brainpower or intellectual capital of their employees and management. Many organizations are drowning in information but starving for knowledge. In order to stay ahead of the pack, organizations must leverage their knowledge internally and externally to survive. Knowledge management (KM) is believed to be the current savior of organizations.

A study conducted by KPMG consulting (KPMG, 2000) about 500 companies in USA and UK reveals that 81% of the respondents said they had or were considering a KM program, 38% had a KM program in place, 30% were currently setting one up and 13% were examining the need for a KM program. Dataquest Inc., a leading research firm, estimated that organizations would have spent \$4.5 billion by 2000, to better leverage their knowledge. According to Gartner Group (Gartner, 1998) US businesses paid \$1.5 billion to consultants for knowledge management advice in 1997 and are expected to pay \$5 billion annually for this advice by 2001.

Knowledge management deals with conceptualization, reviewing, consolidation and action phases of creating, securing, combining, coordinating and retrieving knowledge.

PROBLEM DEFINITION AND OBJECTIVE OF THE STUDY

IDSC faces a problem of employees' high turn over rate (17%), which threaten IDSC to loose its memory. One common mistake many organizations make when they implement KM initiative is to place too much emphasis on the technological aspect of KM and ignore the human resources aspects IDSC developed a knowledge management system called the Organizational Memory <http://www.home.idsc.gov.eg/> but ignored the human factor of KM. The purpose of this study is to test the readiness of employees and managers working in IDSC to adopt knowledge management by focusing on different human aspects related to knowledge management.

THEORETICAL FRAMEWORK OF THE RESEARCH

The readiness of any organization (IDSC; as case understudy) to adopt knowledge management (the dependent variable of the research) is affected by several variables including but not limited to; human resource, Level of technology at the IDSC, Incentive system, Employees turn over, Management structure, and Organization structure.

RESEARCH METHODOLOGY

Two sets of questionnaires have been developed, one targeted the senior and middle managers and the other introduced to the employees in the operational level. The sample was restricted to managers and employees who have spent more than 2 years working at IDSC and have direct or indirect relation to the success or failure of the KM program. A sample size of 40 employees and 20 managers has been questioned about factors influencing the success of implementing a Knowledge Management program and their attitudes towards different aspects.

The overall design of the questionnaire and questions are based on previous research on KM conducted by Jordan and Jones (1997), Anderson (1998), and Wolf (1999). The questionnaire covered items such as:

- Knowledge acquisition (do employees look for knowledge from internal or external sources, and is knowledge acquired deliberately or opportunistically?).
- Ownership (do the employees generally regard their knowledge as highly personal or as being owned at the collective level?).
- Memory (is knowledge chiefly held explicitly or tacitly?).
- Challenges in implementing KM and in managing knowledge, and how IDSC encourage employees to share, contribute and reuse knowledge.

The employees and managers questionnaires had similar sections except the first part (personal information) and the third part (questions concerning knowledge management in IDSC). Questionnaire covered areas on sharing of knowledge, awareness of knowledge manage-

ment in IDSC, barriers facing sharing knowledge and knowledge management in IDSC, change management issues, impact on creativity, incentives, and privacy issues. The findings of these questionnaires helped in answering the major and minor research questions.

QUESTIONNAIRES DEVELOPMENT

Part 1: Personal Information

The questions in this part were designed to get general information about the respondent and their profiles, including; gender, age, functions

Part2: Questions Concerning the Methods Used by Staff to Acquire Information in IDSC

Questions in this part were designed to:

- State what whether they have overview of the knowledge available in IDSC or not.
- Measure their awareness about the knowledge management definitions like: identify, capturing, retrieve, share and evaluate. The aim was to identify weaknesses and strengths of the employees.
- Show how effective the external and internal contacts and sources of information are used to spread and gather knowledge.
- Show IDSC efforts to encourage the capturing and sharing of knowledge.

5-Do you have an overview on the knowledge available in IDSC?

- Yes, I have good general overview
- Yes, I have a good overview in my field of activity
- No, I don't have a good overview

6-How do you start to solve a problem?

- I try to approach the task by way of telephone inquiries
- I delegate the task to others
- I establish a team
- I use know-how from previous projects
- _____

7-Which external sources do you use to obtain information?

- Internet
- Universities
- Research institutes
- Testing institutes
- _____

8- What kind of media do you use predominantly to obtain information?

- Telephone
- Facsimile
- Email
- Internet
- Intranet
- Magazines/ Catalogues
- Professional literature
- _____

9-What additional private efforts do you undertake to obtain personal information benefits?

- None
- Further education and training in my leisure time
- Private relationships
- Private research work
- Magazines
- _____

10-What kind of information do you need in your work?

- Technical
- Commercial
- Product information
- Information about other companies
- Information about clients
- Latest news
- _____

11-What occasions do exist for an exchange of information in IDSC?

- Regular information sessions of employees
- Work group meetings
- Seminars
- After office hours
- No occasions

12-How does information exchange take place between older experienced employees and younger employees in IDSC?

- No regular exchange
- Individuals training before older employees leave the company
- Mixed project teams
- _____

13-What does the IDSC management do to improve the information acquisition efforts of the employees?

- No activities known
- Establishment of dedicated department for information exchange
- Special in-house skill lists (e.g. skill databases)

Part 3: Questions Concerning Knowledge Management in IDSC

- The first two questions in this part were designed to measure whether the IDSC employees understand what is knowledge management and what is the purpose of knowledge management.
- On other hand, the third question was designed to measure the degree of sharing knowledge between employees in IDSC.
- While the fourth question, was designed to measure the degree of how tacit knowledge is transferred among employees at the IDSC.
- The fifth question however, was designed to identify the barriers to sharing knowledge in IDSC. Employees and managers were asked to rank these barriers in a descending order from the most important barrier to the least important one.
- The sixth and seventh questions in this part were designed to assess the impact of knowledge management and the availability of knowledge-base on creativity.
- The last three questions were concerned with the privacy issues regarding knowledge sharing and the relation between competitiveness and knowledge sharing from the employee and manager point of view.
- In Part 3 two questions were added to the managers questionnaire the first question (question number 16) asked managers to rank difficulties facing them to manage knowledge, the second question (question 17) asked managers to rank the impediments to knowledge transfer in IDSC

RESULTS AND DISCUSSION

The results of the surveys will be discussed linked to the research questions.

What Occasions Do Exist for an Exchange of Information in IDSC?

The answer on this question (figure 1) showed that there is a weekly meeting for the whole IDSC staff and each employee can

14-Do you have general overview of Knowledge Management ?

- yes, I have a good general overview
- No

15-What do you think should be the purpose of knowledge management

- Saving of time
- Knowledge transfer
- Avoiding the repetition of mistakes

16-How well do employees share data, information and knowledge in IDSC?

- Do not
- Poorly
- Occasionally
- Often always

17-How often is essential know-how available only in the heads of a few employees, (and difficult to access when they are unavailable)?

- Very Rare
- Rare
- Occasional
- Common
- Very common

18-Please rank barriers facing you to share knowledge in IDSC

- Culture of working alone in closed offices
- Expert Knowledge in the heads of individuals
- Lack of communication
- Personal data stores are common
- "Turf protection" knowledge is power
- Strong departmental barriers
- Rapidly changing technology -makes keeping up difficulty
- Organizational rigidity and specialization - lack of multiskillin
- Distrust in other colleagues data
- People scared that ideas will get hijacked

19-The availability of the knowledge base makes you less creative

- Strongly disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

20-The knowledge base makes you unproductive and less willing to come up with new ideas

- Strongly disagree
- Disagree
- Neither Agree nor Disagree
- Agree
- Strongly Agree

21-Do you feel that privacy of employees is an issue concerning the sharing of knowledge?

- Yes
- No

22-Does sharing of knowledge in your job situation decrease your competitiveness with other colleagues for promotions?

- Yes
- No

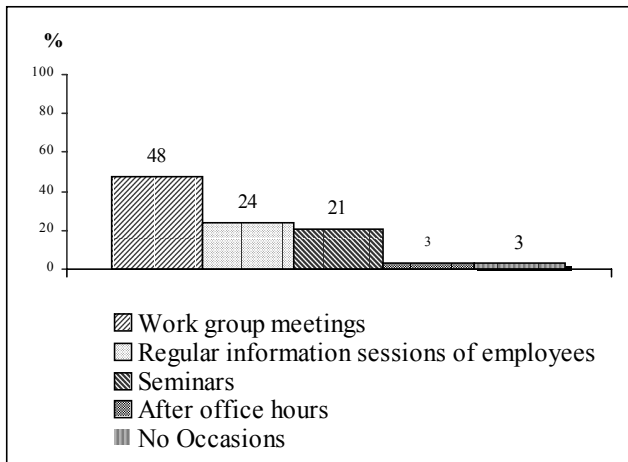
23-The knowledge gathering process may require reviewing your personal work documents and / or emails so as to add information to the knowledge repository. Do you feel this invades your privacy?

- Yes
- No

24-Do you feel compelled to share your ideas with colleagues because of the knowledge management culture at IDSC?

- Yes
- No

Figure 1: Information exchange occasions in IDSC



attend the meeting but. Only 24% of employees indicated that it is a useful meeting, 48% of employees said the work group meeting is the most useful occasion to share information and knowledge at the IDSC.

How Does Information Exchange Take Place Between Older Experienced Employees and Younger Employees?

This question was developed to investigate whether the tacit knowledge is transferred from managers and experienced employees to fresh ones and how it is transferred. Figure 2 shows that, 54% of the respondents revealed that there is no regular exchange of information, 46% revealed that there is a regular exchange of information through mixed project teams (40%), Individual training (4%) and (2%) choose other ways like personal contacts inside IDSC.

Employee Perceptions on Sharing Knowledge in IDSC

Table 1 shows that 30% of employees in the survey shared knowledge "often" or "always", while, 70% "occasionally". Despite this, 28% of the employees felt that it was common or very common for key information to be too localized, creating problems of access.

Employee Barriers to Sharing Knowledge

Employees were asked to rate a list of potential barriers or obstacles to knowledge sharing in their organizations (Table 2). They were allowed to add any other items to the list.

Figure 2: Information exchange among staff at the IDSC

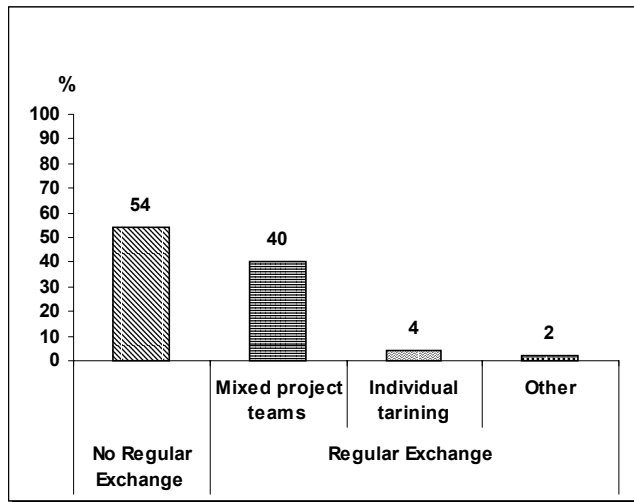


Table 1: Employee perceptions of sharing of knowledge

| How well do employees share data, information and knowledge? | Do Not | Poorly | Occasionally | Often | Always |
|--|-----------|--------|--------------|--------|-------------|
| | 0% | 0% | 70% | 20% | 10% |
| How often is essential Know how available only in the heads of a few employees, (and difficult to access when they are unavailable?) | Very Rare | Rare | Occasional | Common | Very Common |
| | 0% | 12% | 60% | 20% | 8% |

Table 2: Average ranking by employees of barriers to sharing knowledge

| Average Ranking | Employee Barriers to Sharing Knowledge |
|-----------------|---|
| 1 | Strong departmental barriers |
| 2 | "Turf protection" knowledge is power |
| 3 | People scared that their ideas will get hijacked |
| 4 | Lack of communication |
| 5 | Culture of working alone in closed offices |
| 6 | Expert knowledge in the heads of individuals |
| 7 | Distrust in other colleagues data |
| 8 | Personal data stores are common |
| 9 | Organizational rigidity and specialization-lack of multi-skills |
| 10 | Rapidly changing technology- makes keeping up difficult |

In the literature, items such as "turf protection" and "people scared that their ideas will get hijacked" were sometimes given as high barriers to knowledge sharing. These research findings indicate that these barriers were ranked second and third respectively. There was a lot of personal information kept by individuals (often only in their heads), which was not being shared, and there was not enough communication.

Employee Privacy Issues

Table 3 shows that 20% of the employees indicated that they felt compelled to share knowledge with their colleagues because of the Knowledge sharing environment at IDSC. They were asked if they felt that privacy was a concern when it came to sharing knowledge. Although most were satisfied, 30% indicated that their privacy was invaded during the process of sharing knowledge. This percentage increased to 90% when personal work documents and emails were specifically included. 74% of the employees felt that their sharing of

knowledge decreased their competitiveness with other colleagues for promotions. The table below shows a summary of the results in this area of research.

Table 3: Summary of employee opinions on privacy issues

| Employee Privacy Issues | Yes | No |
|---|-----|-----|
| Do you feel that privacy of employees is an issue concerning the sharing of knowledge? | 30% | 70% |
| Does sharing of knowledge in your job situation decrease your competitiveness with other colleagues for promotions? | 74% | 26% |
| The knowledge gathering process may require reviewing your personal work documents and / or emails so as to add information to the knowledge repository. Do you feel this invades your privacy? | 90% | 10% |
| Do you feel compelled to share your ideas with colleagues because of the knowledge sharing culture at your firm? | 20% | 80% |

Difficulties in Managing Knowledge

Senior and middle managers were asked to rate a set of items, which from past research had been shown to cause difficulties in managing knowledge in organizations. Their response (table 4) highlights the uncertainty experienced by many organizations with KM. Identifying the right leader/team for knowledge initiatives, what knowledge should be managed, attracting and retaining right staff Measurement and standards were further problems. On the people side, major concerns were changing people's behavior, and attracting and retaining the right staff. Noticeably "overcoming technical limitations" is last of the ten items. This shows that IDSC, less concerned about the technical issues than the human and managerial ones. Table 4 gives an ordered listing of the managers' biggest difficulties in managing knowledge.

Management Viewpoint on Knowledge Transfer

Senior knowledge management personnel were given a list of impediments to knowledge transfer, based on prior research, and asked to rate them. Table 5 shows that they ranked organizational structural changes and staff turnover as the key impediments to knowledge transfer. Other management issues were also important, but technology concerns only came in eighth.

Table 4: Difficulties in managing knowledge in IDSC

| Rank | Managers' Difficulties in Managing Knowledge |
|------|--|
| 1 | Identifying the right leader/team for knowledge initiatives. |
| 2 | Attracting and retaining talented people |
| 3 | Determining what knowledge should be managed |
| 4 | Defining standard processes for knowledge work |
| 5 | Changing people's behavior |
| 6 | Mapping the organization's existing knowledge |
| 7 | Expert knowledge in the heads of individuals |

Table 5: Management viewpoint on impediments to knowledge transfer

| Rank | Impediments to Knowledge Transfer |
|------|---|
| 1 | Organizational culture |
| 2 | Staff turnover |
| 3 | Non-standardized process |
| 4 | Incentive system |
| 5 | Lack of ownership of the problem |
| 6 | Resistance to cultural change |
| 7 | Configuration /physical feature of workspace |
| 8 | Information/communication technology restraints |

CONCLUSION AND RECOMMENDATIONS

Employees at IDSC acknowledge change management efforts to date, but don't feel that they are actively resisting the process of knowledge sharing. They are concerned about losing power they may have through sharing knowledge, and think this will affect their competitiveness and promotion possibilities. They also perceive the available knowledge-base will aid creativity and productivity. They perceive the major barriers to share knowledge is departmental barriers, expert knowledge often in the minds of individuals and lack of communication. Invasion of privacy is an issue with them especially when personal emails and documents are expected to be reviewed for possible addition to the knowledge-base. Rapidly changing technology was their tenth rated concern.

A successful KM implementation clearly requires a culture of sharing, and a focus on human beings more than technologies and tools. Wolff (1999) concluded that changing people's behavior and organizational culture was the most significant impediment to knowledge transfer. This research has confirmed this. IDSC is not ready to implement a successful KM program. There is a need to communicate the role of KM in the IDSC more fully to employees; job descriptions and performance reviews should take into account the efforts made by employees in this regard.

IDSC needs a strong incentive and reward system to encourage employees to share knowledge and to help in building the culture of sharing knowledge; departmental barriers must be eliminated by forming cross-functional teams to foster an environment where employees could walk into anyone's office to seek help. In addition, individual career successes should be tied to leveraging knowledge. Measures of knowledge sharing must be built into everyone's performance objectives. A tool like balanced scorecard should be used to weigh the results of IDSC knowledge-management initiative. IDSC should not only emphasize on the technological aspect of KM and must increase its effort to improve the humanitarian aspects

These issues are often overlooked and their importance underestimated, and attention needs to be paid to these human aspects so that IDSC can effectively achieve the benefits of KM

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