Knowledge Management as a tool to Overcome Skill – Set Deficiency

Dr. Aparna Marwah

Department of Management

Bharati Vidyapeeth University Institute of Management & Research (BVIMR)

New Delhi, India

aparna.marwah@bharatividyapeeth.edu

Dr. Daljeet Singh Bawa

Department of Management

Bharati Vidyapeeth University Institute of Management & Research (BVIMR)

New Delhi, India

daljeet.bawa@bharatividyapeeth.edu

Dr. Ashima Bhatnagar

Department of Management

Bharati Vidyapeeth University Institute of Management &

Research (BVIMR)

New Delhi, India

ashima.bhatnagar@bharatividyapeeth.edu

Dr. Seema Chaudhary

Department of Management

Bharati Vidyapeeth University Institute of Management &

Research (BVIMR)

New Delhi, India

seema.chaudhary@bharatividyapeeth.edu

Dr. Bhawna Dhawan

Department of Management

Bharati Vidyapeeth University Institute of Management & Research (BVIMR)

New Delhi, India

bhawna.dhawan@bharatividyapeeth.edu

Abstract — Today organizations face brutal economic times. Performance in few areas of a firm's operations can spell success or failure. These areas, called critical success factors (CSF's), vary from one firm to another, but tend to follow certain patterns based on industry. One of the critical success factors is cross-training.

From a positive view point, recession actually means a new beginning, a fresh start from a break. The CEOs who feel the pressure from all sides to do more with less, can take this time to be a perfect opportunity to make the pitch for one more alternative: an enterprise knowledge management (EKM) tool.

Knowledge Management is managing; dealing, with an abstract conceptual know-how, a very subtle framework of experiences, instances, circumstantial and spatial incidences of workforce. The challenge in these recessionary trends in global scenario is "How to create the flow from Tacit Knowledge to Explicit Knowledge." While creating this transition, there should not be any leakages as far as proper communication is concerned. It has been seen that, the transition from tacit to explicit is quite a delicate one as it includes feelings, emotions, values, spatial experiences, circumstances, i.e. added experiential learning. The aim is to contribute to knowledge management sector's succession planning for information management of staff by identifying the skills and to find out whether a skills gap exists among the cadre of staff currently working at various levels in diverse service roles, and, if a skills gap does exist, to identify the nature of that gap.

Keywords: Knowledge Management, Enterprise, Critical Success Factors, Spatial Incidences, Diagnostic Tool

I. INTRODUCTION TO KNOWLEDGE MANAGEMENT

The dynamicity of economic times can spell success or failure owing to a firm's performance. These areas, called critical success factors (CSF's), vary from one firm to another, but tend to follow certain patterns based on industry. One of the critical success factors is cross-training. From a positive view point, recession actually means a new beginning, a fresh start from a break. The CEOs who feel the pressure from all sides to do more with less, can take this time to be a perfect opportunity to make the pitch for one more alternative: an enterprise knowledge management (EKM) tool. Knowledge Management is managing; dealing, with an abstract conceptual know-how, a very subtle framework of experiences, instances, circumstantial and spatial incidences of workforce. The challenge in these recessionary trends in global scenario is "How to create the flow from Tacit Knowledge to Explicit Knowledge." While creating this transition, there should not be any leakages as far as proper communication is concerned. It has been seen that the transition from

tacit to explicit is quite a delicate one as it includes feelings, emotions, values, spatial experiences, circumstances, i.e. added experiential learning. The problem is stated as "A study of today's business enterprises with diverse portfolios exhibiting skill – set deficiency"

II. AIMS AND OBJECTIVES OF THE RESEARCH

The aims and objectives of the research are as follows:

1. To identify the skill set required by senior executives, managers and operations personnel of varied organizational levels, whether these services are converged or not, to enable them to function effectively at the various management levels.

2. To identify the skill gaps of the current generation of information managers working at deputy level who are aspiring to senior information management positions.

3. To put forward proposals as to how the skill gaps identified might be translated into modular learning products, within a coherent framework, for potential delivery via the Web.

4. To make recommendations to relevant bodies within the enterprises' working community and to relevant training providers on the potential application of the open learning model as a means of addressing these skill gaps.

5. To explore the feasibility of developing a diagnostic tool from the findings of the surveys and interviews for assessing both generic and specialist information management skills.

III. BACKGROUND OF KNOWLEDGE MANGEMENT – RESEARCH CONTEXT

In the information age of today's economy the fundamental sources of wealth are no longer natural resources and physical labor but knowledge and communication. Knowledge has thus become the prominent economic resource and has come to play a dominant role in our economy. To manage knowledge should be high on the list of CEOs and executives, for it can give the company that extra mileage to stay ahead of the business.

However, while Knowledge Management (KM), which includes sharing and using of information and skills, is a fairly new concept and has received considerable attention in recent years, the understanding of the area is still in an early stage of development. Many business managers are interested but hardly know how to make KM concrete.

KM solutions deliver the latest and most up to date answers and information across an organization because knowledge sharing and replication ensures that all an organization needs is to recognize that knowledge is widely and unequally distributed correspondence, FAQ's (Frequently Asked Questions) manuals and other information sources, thus KM is as much a mindset as it is a set of tools and related information.

Knowledge sharing within a company has three key results and every knowledge-sharing tool should aim at achieving these. The key results are:-

- Prevention of re-inventing the wheel at different places (i.e. doing a task that has already been completed by someone else and /or at different times, specifically regarding day to day practices. This saves money time, efforts and frustration.

- The creation of new knowledge is stimulated and enabled and corporate wide unity thinking together with higher employee motivation is achieved resulting in improved performance.

- Results in an organization's efforts for better succession planning.

The characteristics of knowledge intensive organization are that they:-

- Value creativity, flexibility adaptability dialogue and learning

- Pay attention to people, relationships context and communication.

- Understand knowledge is dynamic and that is adds value when it is in motion and in use.

- Focus on customer intimacy, markets intelligence, encourages feedback and try to learn faster.

- Believe in generating new knowledge, sharing meaning using language as a tool and cultivate the community.

They see technology as a medium to facilitate relations, cultivate communities to practice, encourage continuous learning recognize knowledge sharing mentoring and apprenticeship. They invest in things which have to be reinvented, learning is the key innovation leading to competitive advantage, adaptively is survival and new knowledge is tomorrow's products.

IV. IMPLEMENTING A KNOWLEDGE MANAGEMENT TOOL

A broad knowledge management tool in an organization requires defining a clear strategy based on the business needs of the organization; keeping the central KM unit small, which oversees overall implementation; making available budget to allow communities to function; supporting the development of communities of practice; keeping information technology user-friendly and responsive to its users needs; orchestrating systematic communications to explain what knowledge means and to keep everyone informed; introducing new incentives to accelerate the shift towards a knowledge culture; and developing a set of metrics to measure progress.

A. Defining a knowledge strategy

Defining a knowledge sharing strategy, which will be endorsed by senior management and front-line staff, is a difficult but essential first step. The strategy should clearly articulate why the

organization should share its know-how, what the organization will share, with whom the organization will share and how the organization will share.

1. Deciding why to share

Next you to decide why to share knowledge - it could be because of the characteristics of the global economy and the plummeting costs of communication you perceive that sharing would enhance your organizational performance, because the new opportunities are worth the shock of cultural and technological transformations that will increase the speed and quality of service delivery lower the cost operations by avoiding rework accelerate innovation, and widen the organizations scope for achieving the objectives.

2. Deciding what to share

Once you decide, what you want to share becomes easy. It could be share country and sector know – how global best practices and research in the field of development or of competitive intelligence. Processes or individual clients etc. the issues of quality and authentication what is being shared should also be addressed.

3. Deciding with whom to share

Depending on the information you decide to share, the next step is to decide as to whom you will share the knowledge with. It could be to share it internally with staff at headquarters and in the field and externally with clients, partners and stakeholders internally. External knowledge sharing poses further issues such as the confidentiality of information given to the clients, partners, etc. copyright of documents and the protection of proprietary assets. Instead of developing constraining procedures to address these issues, it may be better to deal with them as they arise.

4. Deciding how to share

Using multitude of channels to share various forms of knowledge. For instance, a number of groups could be provided a mentor for each new recruit to quickly familiarize them with sector strategies, lending procedures, key recruit to quickly familiarize them with sector strategies, lending procedures, key professional contacts etc. every staff can also call a help deck where packets of information and referral service are available and seasoned professionals can attend and contribute it to technical clinics (working lunches of one-to-two hours) or search the knowledge collections on the intranet. Externally, knowledge sharing takes place virtually on the web, and face-to-face with clients and partners, either during field missions or personal meetings.

B. Organizing knowledge management

The location of the knowledge management unit could be either central or with the information technology group or department of your organization. Whatever its location, the knowledge management organization and functions are:

- A small central unit may be three or more people have overall coordination and facilitation responsibilities;
- Operational managers in the networks and the regions are responsible of implementing the knowledge sharing tool;
- Teams supplemented by help desks are the preferred instrument for sharing know how; and a governance body (knowledge management committee) is responsible at the corporate level for the overall knowledge management policy formulation.

C. Providing a budget for knowledge sharing

It is very important to provide adequate finance for setting up the KM system and its maintenance for it to be successful. This will send a very clear message to every person involved in the process that the organization is serious about the KM tool.

D. Nurturing communities of practice

In most organizations building a repository of knowledge collections is easier than shifting the company's culture towards knowledge sharing. To successfully capture, share and leverage knowledge an organization needs to facilitate and nurture human interactions between professionals who share a common interest or experience, who experience common problems and whose interest is to identify solutions that will improve their work effectiveness. Shared success stories validate the knowledge sharing concept and boost the enthusiasm and commitment of the practitioners.

E. Choosing a technology that helps knowledge sharing

The connection power of information technology often misleads companies to believe that in itself, this technology can leverage the know-how of their professionals and partners. The staff can also access electronically the knowledge collections of teams to get the collective wisdom of their professional practice. However, one has to remember that most of the knowledge of individuals is tacit. It resides deep in their minds and only a fraction of it is indeed explicit. Second, to effectively share this explicit knowledge, the information technology tool should be fast to access, user friendly and easy to operate. It should provide classification and cataloguing capabilities to easily find and quickly retrieve knowledge

The task of setting up such a system is not easy and requires collective effort and should consider other technologies for drawing tacit knowledge as well. Widely available tools, such as the telephone, electronic mail and video-conferencing, play a central role in the organization's knowledge sharing activities. The combination of technology tools and human practices is likely to be more successful than tools that focus on just one aspect. They transfers through technology can be categorized as follows:

- Serial transfer: This happens when a team that performs a task repeats it in a new context.
- Near transfer: When knowledge is moved from a source team to a receiving team doing similar task, but in a different location, near transfer of knowledge takes place.
- Far transfer: This is when tacit knowledge about a non-routine task is moved from a source team to a receiving team.
- Strategic transfer: When very complex knowledge is sent from one team to another, especially when they are separated by time and distance.
- Expert transfer: Transfer of explicit knowledge about a task that may be done infrequently is called expert transfer.

F. Communicating the values of knowledge sharing

The values and importance of knowledge sharing for the organization, groups and individuals in the organization have to be communicated to all concerned for the whole process to be of any use. For this, you could organize knowledge fairs, where groups in your organization can display their knowledge sharing activities and further illustrate with real examples, the benefits of working together. Story Telling and presenting real-life problem solving situations allow each individual in the audience to recast the stories into his or her own contextual work environment.

G. Introducing new personnel incentives

Knowledge sharing should be made an integral part of an organization's formal personnel evaluation system by modifying the small number of core behaviors against which people's performance is assessed. This will send a strong signal to managers and staff that the organization is serious about encouraging and rewarding knowledge sharing behaviors. Annual performance awards reinforcing sharing behaviors could also be used to foster knowledge sharing behaviors.

H. Measuring performance

Measuring the performance of an organization-wide knowledge-sharing tool is a difficult, and sometimes ambiguous, undertaking. On one hand, the return on the significant knowledge sharing

investments needs to be evaluated. On the other hand, the evolution of behavioral changes throughout the organization should be measured. A set of metrics for measuring progress is essential to the sustainability of the knowledge-sharing tool.

At the outset of its tool, you need to focus on measuring inputs (such as budget deployment and recruitment of knowledge management staff) and activities (such as the number of help desks, communities, and knowledge collections available on-line). As implementation progresses the focus needs to be expanded to measuring outputs (such as the number of questions satisfactorily answered by help desks, the number of page-equivalent downloaded from the intra/internet, the number of knowledge database and the usage of electronic tools). Outcomes such as production cycle times, the quality of services, staff and client perceptions etc. should also be measured. Managerial factors, changes in processes, and the external work environment are simultaneously taking place with knowledge sharing activities. As a result, the casual relationship between inputs and impact remains unclear. Therefore, it may be necessary to subject your knowledge-sharing tool to independent and professional assessments to get some sort of feedback on it.

I. Integrating knowledge sharing and learning

It is very important for the employees to integrate the knowledge that is being shared in their work and also learn from it. Synchronization and cross-fertilization should exist between various professional groups. The creation of the networks and the launch of the knowledge-sharing tool rapidly change this situation. Only when people learn from the KM tool, will the knowledge you are collecting and sharing be put to use in actual situations. This is important because unless the knowledge that is being shared is used the very purpose of the KM tool would be defeated.

J. Providing support to the Communities of practice

It is very necessary for the organization to support those within the organization who practice knowledge sharing and using, if you want the process to be successful and overcome early teething problems.

V. HYPOTHESIS FORMULATION

HYP stands for Hypothesis

- HYP1: Acceptance of skill – set deficiency among employees of business firms with diverse portfolios is a common scenario.
- HYP2: Significant difference lies between theoretical aspect of cross functional training (inquiry basis) and when brought into reality.

- HYP3: Significant difference in remuneration when comparing the theoretical (inquiry) aspect and bringing it into rational aspect (the incentives are negligible). Promotion and Advocating of Knowledge Management is not up to the par.

- HYP4: Cross – functional training when leading to desire generating capacity (inspirational in character) and then instigating it into action (cross – functional training in reality) are based on the same parameters.

- HYP 5: Marketing department is found to be the most exciting whereas finance is the least preferred when it came to cross – functioning if given a choice.

VI RESEARCH METHODOLOGY

The study on effectiveness was carried out on the unregimented sample(s) in general as well as the sample segmented by the demographic variables (education, age, sex, and income) and psychological variables (need priority) by tabular analysis. Random samples of Internet users, metropolitan newspaper readers, working professionals were selected from National Capital Region, India. 600 copies of the questionnaire were distributed out of which 518 could be retrieved after they were answered. Further, the sample(s) in general and sample segmented in the above manner were statistically analyzed by using Z-Test.

VII. RESULTS AND DISCUSSION

TABLE 1: Respondents reaction to acceptance of skill – set deficiency in business enterprises with diverse portfolios.

Reaction to	Response	%
Skill set deficiency is prevalent	289	55.79
Skill set deficiency is not prevalent	229	44.21
Total	518	100

From the above data it was seen that out of the 518 valid respondents in the state, 55.79% of the respondent accepted that skill set deficiency is prevalent, while 44.21% of the respondents felt it was not a true fact.

TABLE 2: Respondents opinion regarding comprehensive capacity of employees with regard to knowledge management

Comprehensive capacity of Employees	Response	%

No	218	42.08
Yes	300	57.92
Total	518	100

The above table shows that 57.92% of the respondents were aware of knowledge management and created confidence and a positive attitude in their mind towards enhancing their skill sets while 42.08% of the responded were not of such opinion.

TABLE 3: Respondents retention if having multi – varied skill set.

Retention of Employee	Response	%
Not at all	49	66.60
A bit of the contractual work profile	252	48.65
Major part of the contractual period		
The complete work profile	134	25.87
	83	16.02

From the tabular analysis it was quite clear that 48.65% of the respondents wanted to be retained in the organization for smaller time duration, 25.87% of them did not want leave the organization too early and wanted to stay, 16.02% wanted to stay for longer time duration while 66.60 of the respondents wanted to leave.

TABLE 4: Respondents preference for emotional and rational appeals with respect to cross – functional training.

SCORE	EMOTIONAL APPEALS		RATIONAL APPEALS	
	Response	%	Response	%
Score 1	170	32.82	345	66.60
Score 2	21	4.05	38	7.34
Score 3	327	63.13	135	26.06
Total	518	100	518	100

(Score 1 stands for least preferred, 2 for undecided &3 for most preferred)

From the table it was quite evident that the percentage of the respondents who had strong preference for cross – functional training using emotional appeal was 63.13 while the percentage of the respondents who had strong preference for cross - training using rational appeals was 26.06.

TABLE 5: Respondents opinion regarding emotive appeals
(Desire generating capacity). Are respondents / able to associate with the new departmental
function with respect to a variety of parameters?

Emotive appeals (desire generating capacity)	Yes	%	No	%	Total	%
Values	313	60.42	205	39.58	518	100
Etiquettes	313	60.42	205	39.58	518	100
Ethics	303	58.49	215	41.51	518	100
Education Interest	268	51.74	250	48.26	518	100
ratio (Stimulation)	281	54.25	237	45.75	518	100
Remuneration	180	34.75	338	65.25	518	100
Experiential Facet	136	26.25	382	73.75	518	100
Upbringing	160	30.89	358	69.11	518	100
Cultural Background	217	41.89	301	58.11	518	100
Inherent ability	181	34.94	337	65.06	518	100

(All the departmental functioning like Sales, Marketing, Human Resource, Finance, Production & Operations, Manufacturing and Industrial Relations were taken in this category).

The above table shows that in case of cross departmental functioning 60.42%, 58.49%, 51.74 and 54.25% of the respondents felt that appeals in rational tone played a positive role in creating a want or desire for working in a new department with respect to matrix organization.

TABLE 6: Influence of rational aspects in terms of action.

Influence of Rational	INQUIRED		TRIED/TESTED		TOTAL	
	Res	%	Resp	%	Resp	%

aspects in terms of Action	pon se		onse		onse	
Values	165	31.	353	68.1	518	100
Etiquettes	185	85	333	5	518	100
Ethics	196	35.	322	64.2	518	100
Education	301	71	217	9	518	100
Interest	222	37.	296	62.1	518	100
ratio	399	84	119	6	518	100
Remunerat	324	58.	194	41.8	518	100
ion	358	11	160	9	518	100
Experienti	359	42.	159	57.1	518	100
al Facet	238	86	280	4	518	100
Upbringin		77.		22.9		
g		03		7		
Cultural		62.		37.4		
Backgroun		55		5		
d		69.		30.8		
Inherent		11		9		
ability		60.		30.6		
		31		9		
		45.		54.0		
		95		5		

The above table shows the effect of rational aspects like monetary and non monetary on cross functional training leading to rich knowledge management warehouse. The percentage of inquiry was 31.85% for values, 35.71% for etiquettes, 37.84% for ethics, 58.11% for education, 69.11% for interest ratio (stimulation), 77.03% for remuneration 60.31% for cultural background and 45.95% for inherent ability.   .

The percentage of trial or tested was 68.15% for values, 64.29% for etiquettes,62.16% for ethics,41.89% for education and 57.14% for interest ratio while the % of trial was 22.97% for remuneration, 37.45% for experiential ,30.89% for upbringing, 30.69% for cultural background and 54.05% for inherent ability. The percentage of inquiry was more whereas the trials were brought into place with reluctance and forced super – ordinate pressure to achieve perceived targets.

TABLE 7: Most preferred department in terms of cross – functional training.

Department Preference	Rational	%	Emotional	%	Total	%
Marketing	453	87.45	65	12.55	518	100
Human Resource	182	35.14	336	64.86	518	100
Production and Operations	178	34.36	340	65.64	518	100
Finance	171	33.01	347	66.99	518	100

87.45% of the respondents preferred marketing department by rational appeals in favor of marketing, 64.86% of the respondent preferred ads dominated by emotional for human resource, 65.64% and 66.99% of the respondents preferred ads dominated by emotional appeals for production & operations and finance function respectively.

- Z (calculated) 0.14 < than Z (tabulation) at 5% level of significance. The null hypothesis (HYP1) was accepted. There was no significant difference when it came to denial of skill – set deficiency among employees of business firms with diverse portfolios.

- Z (calculated) 2.32 > than Z (tabulation) at 5% level of significance. The null hypotheses, (HYP 2) were rejected. There was significant difference between theoretical aspect of cross functional training (inquiry basis) and when brought into reality.

- Z (calculated) 2.13 > than Z (tabulation) at 5% level of significance. The null hypothesis (HYP3) was rejected. There was significant difference in remuneration when comparing the theoretical (inquiry) aspect and bringing it into rational aspect (the incentives are negligible)

- Z (calculated) 1.12< than Z (tabulation) at 5% level of significance. The null hypothesis was accepted. There was no significant difference when it came to desire generating capacity (inspirational in character) and then bringing it into action (cross – functional training in reality).

- Z (calculated) 1.94 < than Z(tabulation) at 5% level of significance. The null hypothesis is accepted. Marketing department is found to be the most exciting whereas finance is the least preferred when it came to cross – functioning if given a choice.
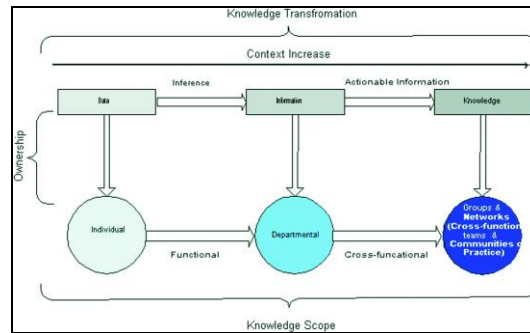
VIII. PROPOSED CONCEPTUAL MODEL

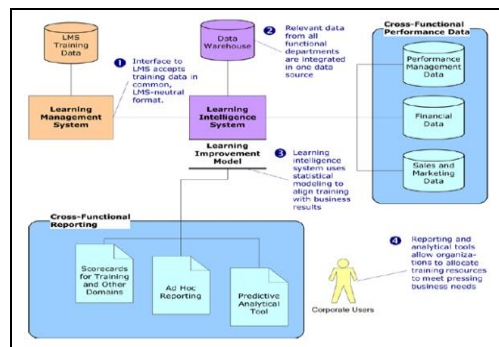Fig. 1: Knowledge Transfer Mechanism in an Organization

Fig. 2: Knowledge Management and Learning Management Systems contributing to explicit knowledge

IX. CONCLUSION

The aim of the research was to contribute to knowledge management sector's succession planning for information management of staff by identifying the skills needed by such staff. It sought to find out whether a skills gap exists among the cadre of staff currently working at various levels in diverse service roles, and, if a skills gap does exist, to identify the nature of that gap.

X. SUGGESTIONS

The business enterprises should review their schemes of staff development and reward management, to ensure that, where appropriate, these schemes provide sufficient encouragement, support and direction to those aspiring to leadership roles, which have the skills to succeed in such roles. They should consider developing a more structured approach to succession planning, through the development of enhanced management development tools. Such tools should encourage staff to analyze and evaluate their skills and abilities, and also provide staff with greater exposure to institutional planning, policy and decision-making, to prepare them better for future director roles.

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