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Collaborative knowledge sharing strategy to enhance organizational learning

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Abstract

Purpose – The main purpose of the paper is to assess and suggest the ways and means to enhance a collaborative knowledge sharing culture in academic institutions, with special reference to information technology (IT)-related education in the Management Faculty of the University of Pune.

Design/methodology/approach – The research is descriptive and empirical in nature because the primary data were collected using the survey method through fact finding techniques such as questionnaire and interview. The main purpose of this research is to obtain information concerning the current status of the phenomena to describe "what exists" with respect to variables or conditions in a situation.

Findings – The sustainability of any industry is closely linked to the manpower talent made available by the academic institutions. Therefore in order to service the needs of the industry in tune with rapidly changing trends, academic institutions have to implement innovative learning systems and be able to match up to the expectations of the industry for knowledge support. Collaborative knowledge sharing links the learning and knowledge processes to enhance organizational learning. The knowledge grows more with communication, sharing of ideas and transfer of knowledge through face-to-face communication, discussions, faculty development programs, industry-institute interactions. Academic institutions should align their human resource strategies, practices and processes in such a way that collaborative knowledge sharing becomes a part of the work culture and overcome the barriers to knowledge sharing. There is need to develop systems that can recognize and reward the efforts of employees who share their knowledge. This can empower collaborative knowledge sharing culture in an academic institute.

Research limitations/implications – In the same context as the practical implications of the paper, it is also appropriate and important to study further how, and to what extent collaborative knowledge improves the performance of the academic institutes. Also, the impact of collaborative knowledge sharing on the quality of higher education.

Practical implications – The recommendations in this paper focus on factors influencing collaborative knowledge sharing culture and also the practices of collaborative knowledge sharing to enhance organizational learning in an academic institute.

Originality/value – This paper contributes original empirical data on the collaborative knowledge sharing strategy to enhance organizational learning.

Keywords Knowledge sharing, Learning organizations, Universities, Information technology, Academic institutions, Collaboration, Organizational learning

Paper type Research paper

1. Introduction

1.1 Organizational learning

Learning is individually driven and once individuals have learned some skills the next question is how the organization will incorporate procedures and assets. In other words, individual learning needs to be transformed into organizational learning. Organizational learning takes place when the organization concerned addresses particular problem or cluster of problems confronting the organization. Then, the problems are solved keeping in the mind the lessons learnt and assimilating competences that represent the collective learning of present, past and future

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employees. Organizational learning is described as the way the organizations build, supplement and organize knowledge and routines around their business activities and business cultures, as well as the way they adopt and develop organizational efficiency by improving the use of broad skills of their workforces (Fiol and Lyles, 1985).

Organizational learning theories provide rich perspectives on the processes that generate and change organizational knowledge. Learning provides the skills, insights and competence to perform well at work. It enables people to adopt and grow in their workplace becoming better problem solvers, more creative and innovative thinkers, more confident and proficient workers.

Researchers have proposed a variety of definitions of organizational learning.

Organizations are seen as learning systems through a number of processes that create new knowledge or modify existing knowledge of which mainly they have attracted attention (Connelly and Kelloway, 2003).

The first process is encoding-organization learn by encoding influences from experiences in organizational routines that guide behaviour. The second process is exploration which captures "search variation, risk taking, experimentation, play, flexibility, discovery and innovation". The third process is exploitation which captures "refinement, choice, production efficiency, selection, implement action and execution" (Davenport and Prusak, 1998). Organizational learning can be considered as systematic behaviour to acquire capacities for dealing with the needs and challenges of organizations in competitive environments.

1.2 The basics of knowledge and knowledge sharing

Knowledge is one of the most important intangible assets possessed by human beings. Unlike the economist's finite resources like land, capital and labour, knowledge is an infinite resource that can generate increasing returns through its systematic use and application (Dodgson, 1993). In the twenty-first century, knowledge is being considered to be the primary production resource instead of capital and labour and managing knowledge resources is the main focus of modern organizations.

Davenport and Prusak have distinguished knowledge from information, and information from data, on the basis of value-adding processes, which transform collected facts and figures into communicable message and then into knowledge and wisdom. Knowledge is defined as "fluid-mix of framed experience, values, contextual information and expert insights that provide a framework for evaluating and incorporating new experiences and information. It originates and is applied in the minds of the knower. In organizations, it often becomes embedded not only in documents or repositories but also in organizational routines, processes, practices, and norms" (Gray, 1989).

This definition brings out two important characteristics:

(1) Knowledge is highly contextualized information enriched with individual interpretation and expertise.

(2) Knowledge is highly person specific and gained through experience, reasoning, intuition and learning.

New knowledge is created when one's knowledge is combined with the knowledge of others. So, effective knowledge sharing enhances individual learning.

"Knowledge sharing is a set of behaviours that involves the exchange of information or provision of assistance to others" (Jashapara and Prasarnphanich, 2004).

1.3 Linking organizational learning and collaborative knowledge sharing

The extraction and creation of new knowledge involves learning. In general, learning is the acquisition and application of new knowledge. So learning is one of the aspects which can be achieved through knowledge sharing. Each aspect of knowledge has a corresponding learning activity that supports it. Learning leads to changes in the behaviour and performance.

"The effective learning processes associated with exploration, exploitation and sharing of human knowledge (tacit and explicit) that use appropriate technology and cultural environments to enhance an organization's intellectual capital and performance" (Kay, 1993).

This definition links the knowledge sharing and organizational learning which are applicable in the study. So, managing knowledge in an academic institute is an important activity because there are two critical issues involved: one, the need to evolve learning technologies that help the faculty to harness new skills and knowledge at a fast pace as per growth in the industry and second, transforming the individual learning into organizational learning. Organizational learning can be defined as the capacity or processes within an organization to maintain or improve performance based on experience. Learning is a systems-level phenomenon because it stays within the organization, even if individuals change.

Individual learning is a prerequisite for organizational learning (Kim, 1993). According to Senge (1990), "organizations learn only through individuals who learn. Individual learning does not guarantee organizational learning but without it no organizational learning occurs". The notion here is that there is a need to expand our attention beyond individual learning processes to collaborative learning and knowledge sharing. Most of our cognitive sciences focus on individual learners and little attention is paid as to how groups or learners acquire and build knowledge together. There is also a need to distinguish between individual and organizational knowledge. Organizational knowledge is distinctive to the firm, is more than sum of the expertise of those distinctive to the firm, is more than the sum of those who work in the firm, and not available to other firms. Here, knowledge is thought to be profoundly collective, above and beyond discrete pieces of information individuals may possess; it is a pattern formed within and draw upon a firm, over time (Schulz, 2001).

According to Nonaka and Takeuchi (1995), "knowledge is created only by individuals. An organization cannot create knowledge on its own without individuals. Organization knowledge creation should be understood as a process that organizationally amplifies the knowledge created by individuals and crystallizes it at the group level through dialogue, discussion, experience sharing or observation". Organizational learning theories provide rich perspectives and the processes that generate and change organizational knowledge. Knowledge sharing provides a basis for organizational learning and to enhance organizational learning the model of knowledge sharing need to be interactive and collaborative.

Collaboration is a process through which people who see different aspects of a problem can constructively explore their differences and search for solutions that go beyond their own limited vision of what is possible (Tiwana, 2000).

The only way to enable sharing of knowledge is by bringing people together through collaboration. Therefore developing individual and team competency through collaboration is the key to effective knowledge sharing.

1.4 Need for collaborative knowledge sharing in academic institutes

Collaborative knowledge sharing can play a critical role for bringing people together the knowledge, experience and skills of multiple team members to contribute to organizational development more effectively than individual team members performing their narrow tasks.

The need of collaborative knowledge sharing to enhance organizational learning can be emphasized by exploring strengths, weaknesses, opportunities and threats (SWOT, see Figure 1) through knowledge-based SWOT for academic institutes.

The knowledge-based SWOT prepares the commencement of collaborative knowledge sharing strategy among academic institutes to transfer them into smart schools.

To identify, develop and exploit potential opportunities to learn, collaborative knowledge sharing strategy is being proposed by the researcher which is of vital importance to enhance organizational learning.

2. Problem statement

Many current day applications of knowledge sharing are happening on the corporate sector. So, it is necessary to assess and enhance knowledge sharing culture in academic institutions which are non-corporate structures and instrumental in achievement of objectives of socio-economic development of any nation. It is observed that in the academic institutions, knowledge sharing does not take place. Therefore the researcher defined the following problem statement: effective knowledge sharing does not take place in academic institutes. So, it is necessary to assess the existing culture pertaining to knowledge sharing and develop collaborative knowledge sharing strategy to

Strength	**Weakness**
1. Small enough to be able readily share information. 2. Culture of sharing information. 3. Faculty already have large number of sources both internal and external to obtain knowledge.	1. Knowledge sharing compromised by lack of time due to workload. 2. On line communities are receiving lowest participative rate. 3. There is no interaction of faculty even at intra institute level. 4. No protocols for sharing explicit knowledge.
Opportunities	**Threats**
1. New Knowledge opportunities thorough new competent staff. 2. To gain more knowledge through IT enabled services. 3. To develop collaborative knowledge sharing culture in academic institutes before serious problems develop.	1. Staff turnover might result in loss of knowledge. 2. Increasing work Load might further compromise ability to share knowledge.

Figure 1.
The knowledge-based SWOT analysis for the academic institutes

enhance organizational learning in the academic institutions. Hence the main problem is to assess and suggest the ways and means to enhance collaborative knowledge sharing culture in academic institutions. Therefore with this problem statement in mind the researcher, decided to formulate the following objectives.

Objectives of research
Objective 1: to identify and study the various performance indicators of collaborative knowledge sharing culture in an academic organization.
Objective 2: to analyse how useful and to what extent the faculty development programmes (FDPs) are helping the faculty.

Objective 3: pilot deployment of collaborative knowledge sharing strategy through formation of a online information technology (IT) forum for knowledge sharing and development and studying it's impact.

Objective 4: to propose collaborative knowledge sharing strategy to enhance organizational learning with special reference to IT education under management faculty of University of Pune.

3. Outline of the research

The study comprises of four phases:

(1) *Observation*: of knowledge sharing culture in academic institutes since research demands accurate observation and description. The main question at this stage was whether collaborative knowledge sharing takes place in academic institutes?

(2) *Field research*: the second phase of research is field research, which consisted of two parts:

- The first part is to assess collaborative knowledge sharing culture in academic institutes. This part of the research gave answers to questions such as: how is work culture correlated to knowledge sharing? What is the response for online discussion forums? How does work culture facilitate knowledge sharing? What is the role of IT in collaborative knowledge sharing?
- The second part is to define a collaborative knowledge sharing strategy. The final stage of this research was implemented recommendation to enhance organizational learning in an academic institute based on field research, desk research and the research questions.

(3) *Desk research*: the field research has been synchronized with the desk research to find information regarding knowledge sharing and organizational learning. The focus is to enhance organizational learning through collaborative knowledge sharing.

(4) *Implemented recommendation*: the reason for doing research is mainly to find the evidence to inform practices, which enhance organizational learning in an academic institute. The final stage of this research was implemented recommendation to enhance organizational learning in an academic institute based on field research, desk research and the research questions. Formation of community of practice namely IT forum for knowledge sharing and development is an implemented recommendation of the research.

4. Hypothesis of the study

H1. Willingness to share knowledge is highly dependent on work culture.

Test statistics

The researcher had identified two variables: work culture and willingness to share knowledge (see Table I). These variables further consisted of four parameters which individually and in totality contributed towards each performance indicator and were evaluated through the questionnaire. In order to test the hypothesis Spearmen's rank correlation coefficient (ρ) was thought to be the most appropriate test as these variables were measured on ordinal scale.

Observation

The first parameter of work culture is positively correlated at 5 per cent level of significance with all the three parameters of willingness to share knowledge. The second parameter of work culture is also positively correlated at 5 per cent significance with the first two parameters of willingness to share knowledge. Therefore V1 and V2 are associated.

Conclusion

The essential key elements of knowledge sharing are climate of trust and openness in the work environment where continuous learning and experimentation are well supported. It is often seen that heavy workload leads to poor knowledge sharing amongst the faculty members in an academic institute. So, the faculty members need to be highly motivated to learn and have the opportunity for sharing at the workplace. The learning process in an academic institution is always exponential, if the work environment is open to new ideas and creativity:

H2. Online discussion forums are receiving lowest participation rate.

Test statistics

Although there are tools to measure the traffic on an online community web portal, the researcher thought beyond as the effectiveness of such endeavors reside in the minds of the people. Therefore in order to test the participation of respondents, the question was incorporated in the questionnaire and the responses were tabulated.

Conclusion

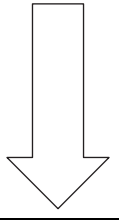
The faculty members are reluctant to exploit the IT tools for knowledge sharing in academic institutes in spite of having access to the latest and best forms of IT infrastructure:

H3. Effective work culture facilitates knowledge sharing amongst the faculty through regular interactions by means of review meetings and workshops.

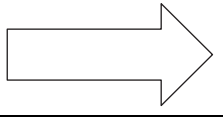
The researcher has identified two variables: work culture and interaction (see Table II). These variables further consist of four parameters which individually and in totality contributed towards each performance indicator and were evaluated through the questionnaire. In order to test the hypothesis Spearmen's rank correlation coefficient ρ was thought to be the most appropriate test as these variables were measured on ordinal scale.

Table I.
Willingness to share knowledge is highly dependent on work culture

V1 = Willingness to share knowledge



V2 = Work culture



		Faculty are highly motivated to learn and have the opportunity for sharing	Our academic organization is flexible, open to new ideas and promotes creativity	Best practices in internal methods are reviewed and shared throughout the organization
Knowledge sharing can be seen as strength	Spearman's ρ correlation coefficient	0.229	0.205	0.168
	Significance (two-tailed)	0.001	0.003	0.018
	N	200	201	199
Knowledge sharing improves the interpersonal relationships amongst the faculty	Correlation coefficient	0.193	0.200	0.094
	Significance (two-tailed)	0.006	0.005	0.187
	N	200	201	199

Notes: V1, performance indicator willingness to share knowledge; V2, performance indicator work culture

V1 = Interaction

V2 = Work culture

		Faculty are highly motivated to learn and have the opportunity for sharing	Our academic organization is flexible, open to new ideas and promotes creativity	Best practices in internal methods are reviewed and shared throughout the organization	Negative behaviour towards knowledge sharing is always discouraged in our organization
Knowledge sharing amongst the internal faculty takes place through regular interactions by means of review meetings and workshops in our institute	Spearman's ρ correlation coefficient	0.282	0.262	0.395	0.241
	Significance (two-tailed)	0.001	0.001	0.001	0.001

Notes: V1, performance indicator interaction; V2, performance indicator work culture

Table II.
Effective work culture facilitates knowledge sharing amongst the faculty through regular interactions by means of review meetings and workshops

Observation
Since the parameter of interaction that knowledge sharing amongst the faculty takes place through regular interactions by means of review meetings and workshops is positively correlated at 1 per cent level of significance with all the four parameters of work culture. Therefore V1 and V2 are associated.

Conclusion
Effective work culture creates a context for social interaction about knowledge amongst the faculty members in academic institutes. Effective work culture is open to new ideas and promotes creativity and best practices in internal methods are regularly reviewed and shared throughout the organization. The work culture strongly influences human interaction:

H4. Industry-institute interaction is vital for knowledge sharing and development.

Test statistics
By collecting the profile of the respondents through the questionnaire, it was found that out of 201 respondents, 113 did not have any industry experience.

A major responsibility of academic institutions is to produce trained manpower to meet the needs of the industry. Industry on the other hand needs to provide input about their needs and requirements. So, industry-institute interaction is vital for knowledge sharing and development in academic institutes.

The opinion of the respondents towards industry-institute interaction was further collected through the question incorporated in the questionnaire and the responses are presented through the statistical tables.

Conclusion
A major responsibility of academic institutions is to produce trained manpower to meet the need of the industry. Their output must cater to the actual need, requirement and expectations of the industry. Industry needs to also play a vital role as they are the one to utilize the products of the academic institutions. So, industry-institute interaction is vital for knowledge sharing and development:

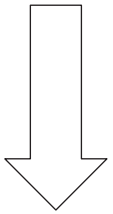
H5. Faculty members are highly motivated to learn and support collaborative knowledge sharing if their efforts are symbolically recognized and appreciated.

Test statistics
The researcher has identified two variables: recognition and work culture (see Table III). These variables further consist of four parameters, which individually and in totality contributed towards each performance indicator and were evaluated through the questionnaire. In order to test the hypothesis Spearmen's rank correlation coefficient ρ was thought to be the most appropriate test as these variables were measured on ordinal scale.

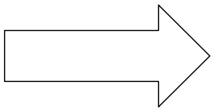
Observation
The first parameter of recognition is positively correlated at 1 per cent level of significance with the three parameters of work culture.

The second parameter of recognition is positively correlated at 1 per cent level of significance with the three parameters of work culture.

V1 = Recognition



V2 = Work culture



		Faculty are highly motivated to learn and have the opportunity for sharing	Our academic organization is flexible, open to new ideas and promotes creativity	Best practices in internal methods are reviewed and shared throughout the organization	Negative behaviour towards knowledge sharing is always discouraged in our organization
Knowledge sharing is monitored and recorded positively in performance appraisal of the faculty	Correlation coefficient	0.312	0.209	0.281	0.083
	Significance (two-tailed)	0.001	0.003	0.001	0.249
Individual faculty members are recognized for team work and knowledge sharing	Correlation Coefficient	0.131	0.248	0.256	0.078
	Significance (two-tailed)	0.065	0.001	0.001	0.279
The academic organization symbolically recognizes (through newsletter or website) those who support and put their efforts towards collaborative knowledge sharing	Correlation coefficient	0.051	0.227	0.260	0.214
	Significance (two-tailed)	0.480	0.001	0.001	0.003
Feedback mechanism is in place and seen as an opportunity to learn	Correlation coefficient	0.187	0.309	0.296	0.196
	Significance (two-tailed)	0.008	0.001	0.001	0.006

Notes: V1, performance indicator recognition; V2, performance indicator work culture

Table III.
Faculty members are highly motivated to learn and support collaborative knowledge sharing if their efforts are symbolically recognized and appreciated

The third parameter of recognition is positively correlated at 1 per cent level of significance with the three parameters of work culture.

The fourth parameter of recognition is positively correlated at 1 per cent level of significance with all the four parameters of work culture.

Therefore, V1 and V2 are associated.

Conclusion

Faculty members are highly motivated to learn and support collaborative knowledge sharing if their efforts are symbolically recognized and appreciated. There is a need to develop systems that can recognize and reward the efforts of the employees for team work and knowledge sharing. Recognition is the acknowledgement of individual contributions and it is visible. The academic institute should symbolically recognize (through news letter or web site) faculty members who support and put their efforts towards collaborative knowledge sharing. To align rewards and recognition to support appropriate behaviours, there is also a need to monitor and record knowledge sharing positively in the performance appraisal of the faculty:

H6. There is no interaction of faculty even at intra-institute level (group of institutes under the same management).

Test statistics

The opinion of the respondents was sought regarding effectiveness of interaction of faculty at intra-institute level and the responses were tabulated.

Conclusion

There is no interaction of faculty even at intra-institute level (group of institutes under the same management). The purpose of intra-institute interaction is to increase information dissemination, integration and to improve horizontal and vertical communication and collaboration of the academic organization as a whole. Such interaction can be facilitated through intranet:

H7. IT facilitates collaborative knowledge sharing through various tools.

Test statistics

The opinion of the respondents was sought regarding effectiveness of IT to facilitate collaborative knowledge sharing through various tools and the responses were tabulated.

Conclusion

"Explicit" knowledge is visible in the sense that can be expressed through communication forms for dissemination. But "tacit" knowledge is one that cannot be expressed. Knowledge starts off in tacit form and can be transferred to other individuals in this form. So, knowledge needs to be transformed into an explicit form to be stored and later retrieved. There are tremendous difficulties in these transformations especially in capturing knowledge accurately and then representing it in understandable form. IT provides tools, which can solve most of these issues. IT enhances communication across boundaries and time zones:

H8. FDPs help to promote knowledge sharing and improve quality of teaching.

To analyse how useful and to what extent the FDPs are helping the faculty, five different FDPs organized by University of Pune between the academic years 2005-2008 were selected and evaluated by finding various reasons for how the new knowledge has been gained by attending the FDP. It was seen that FDPs help to promote knowledge sharing and improve quality of teaching.

Test statistics

The opinion of respondents regarding the parameter "knowledge sharing amongst the faculty members" for all the five FDPs were covered under the study and it was seen that in all the FDPs, the faculty expressed that new knowledge has been gained by attending the FDP because there was knowledge sharing amongst the faculty.

The important factor of teaching methodology considered for the study is quality of teaching.

Respondents have been asked to suggest which of the collaborative knowledge sharing practice is best suited for the development of quality of teaching based on their own perception and experiences.

After the analysing the data it was found that for the development of quality of teaching, the collaborative knowledge sharing practice is FDP. Majority of the respondents (39.8 per cent) recommended FDP as a practice for the development of quality of teaching.

Conclusion

FDPs help to promote knowledge sharing and improve quality of teaching. There is continuous need for FDPs to enhance the skills of faculty members in developing contemporary and comprehensive courses in their subject area of expertise. FDPs involve active participation of faculty members from various institutes to share and learn ideas and experience. The discussion among participants facilitates knowledge sharing.

5. Findings of the study

(1) The identification and study of five performance indicators which influence collaborative knowledge sharing culture in an academic institute. These include work culture, interaction, willingness to share, recognition and IT.

(2) In order to provide effective training to the faculty members, it is important for the academic institutions to understand the reasons because of which, the new knowledge is gained through attending the FDPs. The analysis of the reasons helped to analyse how useful and to what extent the FDPs are helping the faculty members. The reasons are as follows:

- Knowledge sharing amongst faculty.
- Depth of knowledge of speaker.
- Hands on experience/practice.
- The programme is objective focused.
- The programme content was logically presented.
- The knowledge gained through this programme is directly applicable to the job.

- Effective opportunities to clear doubts in question and answer session.
- The contents of the programme facilitated learning.
- Duration of the programme was adequate.
- Programme accelerated thought process.
- Opportunity to develop interpersonal relationships and interaction with industrial experts.

(3) The objective of the study was to study the impact of the pilot deployment of collaborative knowledge sharing strategy through formation of online forum for knowledge sharing and development. The IT forum formed and it was a true representation of communities of practice (COP). COP is defined as collection of individuals bound by informal relationships that share similar work roles and a common context. The data collected from the respondents and the discussion with various faculty members enabled the researcher to draw conclusions and to study the impact of formation of online IT forum for knowledge sharing and development.

The formation of IT forum for knowledge sharing and development can provide a platform for knowledge sharing:

- IT forum of this nature could result in increased cooperation and coordination between faculties of different institutes in spite of the heavy workload faculty should actively participate in knowledge sharing activities.
- IT forum could result in imparting the interpersonal relationships amongst the faculty.
- IT forum could enable the best practices to be followed in teaching and learning environment.

(4) Collaborative knowledge sharing strategy: collaborative knowledge sharing strategy to enhance organizational learning in academic institutes related to IT education.

There could be various strategies to enhance organizational learning in non-corporate structures like academic institutions. The key practices of collaborative knowledge sharing to enhance organizational learning in academic institutes are FDPs, COP and industry-institute interaction.

6. Recommendations

(1) Development of collaborative knowledge sharing culture in academic institutes:

The collaborative knowledge sharing culture is required to be imbibed within academic institutes to enhance organizational learning.

For achievement of successful implementation of collaborative knowledge sharing culture in academic institutes, the following are the requirements:

- Identify and overcome barriers for knowledge sharing through fostering effective work culture in an academic institute.
- There is a need to increase the interaction among the faculty both at intra-institute and inter-institute level.
- Willingness to share knowledge of the employees in an academic institute need to be enhanced.

- The introduction of rewards and recognition by the management of the academic organization towards effective knowledge sharing in an academic culture.
- It is recommended that IT push need to be given for collaborative knowledge sharing.
  - There are tremendous difficulties in capturing the knowledge and then representing in an understandable form and it was found that online discussion forums are receiving lowest participative rate. IT facilitates collaborative knowledge sharing through various tools such as e-mail, chatting/instant messaging, discussion groups and video conferencing.

(2) Need-based FDPs with a view to enhance learning in academic institutes should clearly focus on the following aspects:

- Hands on experience/practice.
- The programme should be objective focused.
- Duration of the programme should be adequate.
- The programme should accelerate thought process.
- The programme content should be logically presented.
- The contents of the programme should facilitate learning.

(3) Formation of COP: COP can be defined as inter- or intra-organizational members of people that share knowledge experiences and create a shared understanding of the mutual practices by interacting both face to face and virtually on a regular basis. They are self-organizing systems that share the experiences and knowledge to enhance the organizational learning through informal learning and mutual engagement.

(4) The industry-institute interaction needs to be enhanced to advance level of linkage through joint research projects to promote the growth of the faculty. Understandings with the industry should eventually reflect in equipping the faculty adequately that the most of the faculty related to IT education should take up teaching profession by choice and not by compulsion.

(5) The collaborative knowledge sharing practices can be used to create an impact on the various factors of teaching methodology (see Table IV).

Impact on factors of teaching methodology	Key practices of collaborative knowledge sharing		
	Faculty development programmes	Communities of practice	Industry institute interaction
1. Depth of knowledge	✓		
2. Quality of teaching	✓		
3. Content enrichment	✓	✓	✓
4. Delivery	✓	✓	
5. Pedagogy/methodology	✓	✓	
6. Dissemination of information		✓	
7. Level of confidence	✓	✓	✓
8. Development of innovative teaching practices	✓	✓	
9. Helped in understanding the requirements of students	✓		
10. Helped in understanding the industry requirement			✓

Table IV.
Collaborative knowledge sharing strategy

7. Scope for future research

The recommendations in this study focus on factors influencing collaborative knowledge sharing culture and also the practices of collaborative knowledge sharing to enhance organizational learning in an academic institute. Further, it is also important to study the following: how and to what extent collaborative knowledge improves the performance of the academic institutes; and the impact of collaborative knowledge sharing on the quality of higher education.

References

Connelly, C.E. and Kelloway, E.K. (2003), "Predicators of employee's perceptions of knowledge sharing cultures", *Leadership and Organization Development Journal*, Vol. 24 No. 3, pp. 294-301.

Davenport, T.H. and Prusak, L. (1998), *Working Knowledge: How Organization Manage What They Know*, Harvard Business School Press, Boston, MA, p. 5.

Dodgson, M. (1993), "Organizational learning – a review of some literature", *Organization Studies*, Vol. 14 No. 3, pp. 375-94.

Fiol, C.M. and Lyles, M.A. (1985), "Organizational learning", *Academy of Management Review*, Vol. 10 No. 4, pp. 803-13.

Gray, B. (1989), *Collaborating: Finding Common Ground for Multiparty Problems*, Jossey-Bass, San Francisco, CA.

Jashapara, D.J. and Prasarnphanich, P. (2004), "Understanding the antecedents of effective knowledge management: the importance of a knowledge-centered culture", *Decision Sciences*, Vol. 34 No. 2, pp. 351-84.

Kay, J. (1993), *Foundations of Corporate Success*, Oxford University Press, New York, NY.

Kim, D. (1993), "The link between individual and organizational learning", *Sloan Management Review*, Autumn.

Nonaka, I. and Takeuchi, H. (1995), *The Knowledge Creating Company*, Oxford University Press, New York, NY.

Schulz, M. (2001), "The uncertain relevance of newness: organisational learning and knowledge flows", *Academy of Management Journal*, Vol. 44 No. 4, pp. 661-81.

Senge, P.M. (1990), *The Fifth Discipline: The Art and Practice of the Learning Organization*, Doubleday, New York, NY.

Tiwana, A. (2000), *The Knowledge Management Toolkit: Practical Techniques for Building a Knowledge Management System*, Prentice Hall, Upper Saddle River, NJ.

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