CHALLENGES IN APPLYING KNOWLEDGE MANAGEMENT INITIATIVES IN PUDUCHERRY COLLEGE EDUCATION: AN EXPLORATORY ANALYSIS

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Abstract

Purpose: This research paper focuses on the difficulties of college education with respect to Knowledge Management Tools in the colleges.

Methodology/ **Design**/ **Approach:** This paper work is based on the survey questionnaire designed to obtain the information on Knowledge Management initiatives administered to random sample of 200 Teachers of Arts and Science Colleges in Puducherry.

Findings: Outcome of empirical research identified the factors of barriers in application of Knowledge management Practices in the College Education.

Research Implication: Barriers are emerging in the knowledge activities in the structural and normative Reason. College Education needs systematic practices, which offers a free flow of knowledge transfer activities at the academic institutions.

Originality/Value: The present research paper assesses the factors of barriers in application of KM System on the development of college education.

Keywords: Knowledge Management, Knowledge Management Initiatives, Knowledge Management practices, Higher Learning Institutions, Puducherry.

Paper Type: Research paper

Introduction

Knowledge Management (*KM*) is a key element in finding, organizing, filtering, storing and presenting information in a method that improves the employee's comprehension. *KM* assists any type of institutions to get understanding from its own experience. *KM* initiatives help the organisation in acquiring, storing and utilizing knowledge for dynamic problem solving and also strategic planning. It also enable to hold intellectual assets of an organisation from decay,

adds to firm intelligence and provides increased flexibility. *KM* includes activities like discovering, capturing, sharing, and applying knowledge in the forms of resources, documents, and people skills, so as to enhance, the knowledge impact on the organisation's goal achievement in a cost-effective manner.

Knowledge Management (*KM*) may simply be defined as doing what is required to get the most out of available knowledge resources. Peter Drucker (1992), considered as the father of *KM* gives more Barriers to knowledge than the resources such as land, labour, and capital. Further he adds that the knowledge society highly dependent on two factors viz., systematic

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work on the quality of the knowledge and productivity of knowledge. *KM* focuses on organizing available knowledge in an organization. It enables to transform data and information and makes them available to the users for effective productivity.

Nowadays Knowledge management tools is used in all types of organisations and extended to private enterprises and international charities. Knowledge management initiatives result in the attainment of organizational objectives. It enables an organisation not only to become more knowledgeable, but also to create, transfer and apply knowledge for better achievement of objectives. Efficient use of *KM* process will improve the of products quality.

Research Objectives of the Study

This study has identified the objectives for the purpose of assessing the KM status of *HLIs* with the help of Teachers' perception.

- 1. To assess the major factors in the on Barriers of KM.
- 2. To assess the difference exists between Gender, Types of Institution, Age of Institution and Teachers' Experience on Barriers of KM.

Data Collection

A structured questionnaire was distributed by personal visits and by post for the colleges that are situated far away from the state headquarters. In the 8 Arts and Science Colleges, the questionnaires were distributed to 215 respondents with a return of 200 questionnaires.

Profile of the Respondents

The profile of the respondents covers the backdrop of the respondents. Since the study is related to the Teachers' perception on *KM*, it contains the *Barriers of KM*,. The above said perceptions may vary on the basis of the profile of the respondents. The profile includes Respondents' Gender, Institution type, Age of Institution and Respondents' Experience.

Gender of Respondents

| Table 1 Gender | · Of Respondents |
|----------------|------------------|
|----------------|------------------|

| S.No | Gender | Number of Respondents |
|-------|--------|-----------------------|
| 1 | Male | 135 |
| 2 | Female | 65 |
| Total | | 200 |

Source: Computed from Primary Data

Type of Institution

In the type of institution is categorized as Government, Government-aided and Private. The distribution of respondents on the basis of type of institution is shown in the Table placed below.

| S.No. | Type Of Institution | Number of College |
|-------|---------------------|-------------------|
| 1 | Government | 04 |
| 2 | Government-aided | 03 |
| 3 | Private | 01 |
| | Total | 08 |

 Table 2 Type Of Institution

Source: Computed from Primary Data

50 per cent of the respondents were from Government institutions.

Age of Institution

Based on the years of existence, the institutions are categorised as < 5 years, 5-10 years, 10-15 years, 15-20 years and >20 years. The distribution of respondents on the basis of Age of Institution is presented in the table below.

| S.No | Years | Number of respondents |
|------|---------|-----------------------|
| 1 | < 5 | 08 |
| 2 | 5 - 10 | 16 |
| 3 | 10- 15 | 20 |
| 4 | 15 - 20 | 36 |
| 5 | > 20 | 120 |
| | Total | 200 |

Table 3 Age Of Institution

Source: Computed from Primary Data

The above Table shows that majority of the respondents working in the fourth category.

Experience of the Respondents

Table 5 indicates the respondents' level of experience. The Teachers are classified under fivecategories such as < 5 years, 5-10 years, 10-15 years, 15-20 years and > 20 years.

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| S.No | Experience (in years) | Number of respondents |
|------|-----------------------|-----------------------|
| 1 | < 5 | 30 |
| 2 | 5-10 | 74 |
| 3 | 10-15 | 34 |
| 4 | 15-20 | 32 |
| 5 | > 20 | 30 |
| | Total | 200 |

Table 4 Experience of the Respondents

Source: Computed from Primary Data

Among the total number of respondents, a higher proportion of teachers (37%) falls under the second category of experience.

Factors Contributing to Barriers of KM

Many researchers have identified various variables signalling the *Barriers of KM*. Those barriers have to be handled by the college management for the efficient utilization of *KM* system. Emphasising Individual importance, Fear of losing individual importance, Fear of sharing for job promotion, Hesitation to learn new knowledge, Inflexibility of staff behaviour and attitude, Lack of understanding among staff, Lack of trust with colleagues, Lack of support from management, No standardised procedure, Bureaucratic management, Work load and Lack of financial resources are the barriers of the *KM* in HLIs.

Factor analysis has been applied to group the different barrier variables into right categories for effective monitoring and intensive control of *KM* barriers.

Table 5 shows the results of KMO and Bartlett's test. This test has been applied to ascertain the sampling adequacy for applying factor analysis.

| Kaiser-Meyer-Olkign Meas | 0.512 | |
|-------------------------------|-------|---------|
| Approx. Chi-Square | | 465.697 |
| Bartlett's Test of Sphericity | Df | 66 |
| | Sig. | 0.000 |

KMO and Bartlett's Test for KM Barriers

Source: Compiled from primary data

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It is clear from the table that sampling adequacy with 0.512 and chi-square value of the Bartlett's test of sphericity is 465.967 and they are statistically significant at 1 per cent level. In view of the adequacy of sample, factor analysis has been made to identify the principal component factors.

Table 6 shows the relative importance of each barrier variable through extraction values and the percentage of variance and cumulative percentage of variance in respect of 12 barrier variables.

| Code | Difficulties | 1 | 2 | 3 | 6 | Commu nalities | Factor Name |
|-------|---|------|------|------|---|-------------------|---------------------|
| dif10 | Emphasise on Individual Focus | .931 | | | | .874 | |
| dif20 | Fear of losing individual importance | .727 | | | | .648 | Individual |
| dif19 | Fear of sharing for job promotion | .677 | | | | .780 | Barriers |
| dif16 | Hesitation to learn new knowledge | .552 | | | | .737 | |
| dif04 | Inflexibility of staff behaviour and attitude | | .933 | | | .558 | |
| Dif09 | Lack of understanding among staff | | .874 | | | .623 | Group Barriers |
| dif18 | Lack of trust with colleagues | | .697 | | | .548 | |
| dif13 | Lack of support from management | | | .798 | | .872 | |
| dif07 | No standardised procedure | | | .729 | | .642 | Management Barriers |
| dif12 | Bureaucratic management | | | 703 | | .586 | |

Table 6 Communalities, Total Variance & Factor Loading For Barriers Of KM

| dif11 | Work load | | | | .634 | .598 | |
|--------|-----------------------------|--------|------------|--------|-------|------|------------------------------|
| dif03 | Lack of financial resources | | | | .446 | .566 | Financial & Time Barriers |
| Eigen | values | 1.860 | 1.397 | 1.254 | 1.138 | | |
| Percer | tage of variance | 16.501 | 11.64 1 | 10.446 | 9.484 | | |
| Percer | tage of cumulative | 16.5 | 27.14 | 37.58 | 66.93 | | |

Source: Compiled from primary data

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization

The above table reveals that the factor loading of values of 12 variables ranging between 54.8 per cent and 87.4 per cent. The barrier variables shown in the table have been condensed into 4 major factors viz., Individual barriers, Group barriers, Management barriers and Financial and time barriers.

The table comprises four factors with their appropriate barrier variables arranged according to their loadings. The 'Individual barrier' factor includes four variables with their values in parentheses are, Emphasise Individual Importance (0.931), Fear of Losing Individual Importance (0.727), Fear of Sharing for Job Promotion (0.677), Hesitation to Learn New Knowledge (0.552). The presence of any of these factors has to invite the attention of management to take appropriate steps to check the difficulties while implementing the *KM* initiatives.

Factor 2 titled as 'Group barriers' comprises the barriers arranged according to their loading values. A casual observation of Group barriers listed in the factor 2 clearly emphasises the need to monitor barriers surviving among the Teachers. Inflexibility of staff behaviour and attitude (0.933), Lack of understanding among staff (0.874), Lack of trust with colleagues (0.697) are coming under the purview of factor 2. Among the three variables Inflexibility of staff behaviour and attitude is the major barrier under this factor.

A close scrutiny of factor 3 titled as 'Management barriers' shows that the Lack of support from management (0.798) and No standardised procedure (0.729) are the significant barrier in this factor. However, Bureaucratic management (-0.703) is not a significant barrier which is evidenced by the negative loading factor.

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Factor 4 (Financial and Time barriers) consists of two variables viz., Work load and Lack of financial resources. Out of the two variables work load is the major barrier with the loading factor 0.634.

| Factors | Ge | Total | |
|---------|--------|-------------|--------|
| Factors | Male | Male Female | |
| IB | 3.38 | 3.32 | 3.34 |
| | (1.45) | (1.49) | (1.47) |
| G B | 2.93 | 3.18 | 3.07 |
| | (1.14) | (1.10) | (1.11) |
| МВ | 3.11 | 3.30 | 3.22 |
| | (1.21) | (1.12) | (1.16) |
| FTB | 3.10 | 3.11 | 2.98 |
| | (1.73) | (1.17) | (1.15) |

| Table 7 | Mean And Standard Deviation Of Teachers' Perception On Barriers Of Km In |
|---------|--|
| | Respect To Gender |

Note: Figures in the parentheses are standard deviation.

Source: Computed Results based on Primary Data using SPSS.

The above table indicates that the "individual barrier" is the major barrier for KM among the teachers of the colleges with a mean score of 3.22.

Table 8 Mean And Standard Deviation Of Teachers' Perception On Barriers Of Km InRespect To Type Of Institution

| Factor of barrier | Govt. Aided | Private | |
|-------------------|-------------|---------|--------|
| ΙB | 3.07 | 3.59 | 3.44 |
| | (1.71) | (1.33) | (1.47) |
| G B | 3.07 | 2.98 | 3.07 |
| | (1.14) | (0.92) | (1.11) |
| МВ | 2.83 | 3.05 | 3.22 |

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| | (1.02) | (0.83) | (1.16) |
|-----|--------|--------|--------|
| FTB | 3.00 | 3.18 | 2.98 |
| | (1.15) | (1.36) | (1.15) |

Note: Figures in the parentheses are standard deviation.

Source: Computed Results based on Primary Data using SPSS.

Table 8 shows the mean value of individual barriers is higher than the other barriers (Mean score: *3.22* and S.D:1.46).

Table 9 represents the mean and standard deviation score of Teachers perception on *Barriers of KM* in respect of length of service of Teachers.

Table 9 Mean And Standard Deviation Of Teachers' Perception On Barriers Of Km InRespect Of Age Of The Institution

| Factors | Below | | 10 - | 15 – | Above | Total |
|---------|--------|--------|--------|--------|--------|--------|
| | 5 | 5 - 10 | 15 | 20 | 20 | |
| | Years | Years | Years | Years | Years | |
| IB | | | | | | |
| | 3.51 | 3.22 | 3.56 | 3.00 | 3.15 | 3.34 |
| | (1.31) | (1.52) | (1.53) | (1.60) | (1.38) | (1.47) |
| G B | 2.90 | 2.88 | 3.33 | 3.25 | 2.95 | 3.07 |
| | (1.16) | (1.04) | (0.99) | (1.21) | (1.36) | (1.11) |
| МВ | 3.10 | 3.48 | 3.42 | 2.73 | 3.15 | 3.22 |
| | (1.19) | (1.14) | (1.14) | (1.10) | (1.13) | (1.16) |
| FTB | 3.03 | 3.11 | 2.75 | 2.98 | 3.20 | 2.98 |
| | (1.19) | (1.16) | (1.07) | (1.18) | (1.34) | (1.15) |

Note: Figures in the parentheses are standard deviation.

Source: Computed Results based on Primary Data using SPSS.

It is clear from the table that the mean score of individual barrier is more to the Teachers with less than 5 years of experience (Mean value: 3.46).

| Factors | Below 5 Years | 5 – 10 Years | 10 – 15 Years | 15 – 20 Years | Above 20 Years | Total |
|---------|---------------------|-----------------|------------------|------------------|----------------------|--------|
| ΙB | 3.60 | 3.35 | 3.33 | 2.96 | 3.67 | 3.34 |
| | (1.36) | (1.42) | (1.57) | (1.65) | (1.53) | (1.47) |
| G B | 3.06 | 3.03 | 3.26 | 2.98 | 3.33 | 3.07 |
| | (1.10) | (1.09) | (0.97) | (1.21) | (1.26) | (1.11) |
| МВ | 3.25 | 3.06 | 3.43 | 3.30 | 3.50 | 3.22 |
| | (1.21) | (1.17) | (1.16) | (1.13) | (0.87) | (1.16) |
| FTB | 2.94 | 2.99 | 2.90 | 3.16 | 2.17 | 2.98 |
| | (1.24) | (1.19) | (1.06) | (1.07) | (1.26) | (1.15) |

Respect To Year Of Experience

Table 10 Mean And Standard Deviation Of Teachers' Perception On Barriers Of Km In

Note: Figures in the parentheses are standard deviation.

Source: Computed Results based on Primary Data using SPSS.

The mean score for individual barrier is higher than the other barriers (Mean score: 3.22 and S.D.: 1.46).

Conclusion

The educational institutions in India may use the *KM* initiatives as applied in the Corporate Sector which will facilitates a better result in the decision-making process, abridged curriculum development cycle and process cost. The education management should make an polici to included *KM* system to provide inclusive information to utilise the existing knowledge in the organisation and add their knowledge to it. The results of the study suggest that upgrading in the *KM* system by overcoming the existing barriers on the sharing of information would improve the Teachers' fulfillment in their performance. To a guaranteed positive outcome, notice to the conclusions found in the study is important for the efficient functioning of the colleges.

Academic review can be characterised as two sides of the same coin, in the logic that learning involves finding and improvement of errors to progress learning. This empirical study attempted to find answer for the research question "how the knowledge sharing activities are

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managed in HLIs which is completely related to Teachers' perception on their performance outcomes". This study has used a very explicit definition of learning which emphasises the role of data and also provides a more detailed analysis of Teachers' perception on the *KM* Status of Educational Institutions. Further, this research work identifies the factors *KM* and Facilities and Methods of *KM*, which robustly control the growth of the HLIs. This work also providing idea to the Teachers that accepting the most important task of the KM Tools in the intellectual activities may improve their performance. Moreover, the performance of the Teachers may be augmented by identifying the areas to be improved.

References:

- Alavi, M., & Leidner, D. E. (2001). Review: Knowledge management and knowledge management systems: Conceptual foundations and research issues. *MIS quarterly*, 107-136.
- Alavi, M., & Tiwana, A. (2003). Knowledge management: The information technology dimension. *The Blackwell handbook of organizational learning and knowledge management*, 104-121.
- Appleyard, M. M. (1996). How does knowledge flow? Interfirm patterns in the semiconductor industry. *Strategic management journal*, *17*(S2), 137-154.
- Awang, M., Ismail, R., Flett, P., & Curry, A. (2011). Knowledge Management in Malaysian School Education: Do the Smart Schools do it Better? *Quality Assurance in Education*, 19(3), 263-282.
- Bennett, R., & Gabriel, H. (1999). Organisational factors and knowledge management within large marketing departments: an empirical study. *Journal of Knowledge Management*, 3(3), 212-225.
- Bhusry, M., Ranjan, J., & Nagar, R. (2011). Implementing Knowledge Management in Higher Educational Institutions in India: A Conceptual Framework. *International Journal of Computer Applications*, 29(1), 34-46.
- Bierly, P., & Chakrabarti, A. (1996). Generic knowledge strategies in the US pharmaceutical industry. *Strategic management journal*, *17*(S2), 123-135.
- Cain, T. J., Branin, J. J., & Sherman, W. M. (2008). Knowledge management and the academy. *Educause quarterly*, *31*(4), 26-33.

- Chyi Lee, C., & Yang, J. (2000). Knowledge value chain. *Journal of management development*, 19(9), 783-794.
- Cope, R. F., Cope III, R. F., & Folse, R. O. (2004). Knowledge Management issues for Higher Education. Paper presented at the Allied Academies International Conference. Academy of Management Information and Decision Sciences. Proceedings.
- Costa, R., Lima, C., Antunes, J., Figueiras, P., & Parada, V. (2010). *Knowledge Management Capabilities Supporting Collaborative Working Environments in a Project Oriented Context.* Paper presented at the European Conference on Intellectual Capital, Lisbon.
- Davenport, T. H., & Prusak, L. (1998). Working knowledge: How organizations manage what they know: Harvard Business Press.
- Elenkov, D. S. (2002). Effects of leadership on organizational performance in Russian companies. *Journal of Business Research*, 55(6), 467-480.
- Fahey, L., & Prusak, L. (1998). The eleven deadliest sins of knowledge management. *California management review*, 40(3), 265-276.
- García, I. (2014). *Knowledge Management and its Applicability to Higher Educational Institutions*. Paper presented at the International Forum Journal.
- Gloet, M., & Terziovski, M. (2004). Exploring the Relationship between Knowledge Management Practices and Innovation Performance. *Journal of Manufacturing Technology Management*, 15(5), 402-409.
- Graham, A. B., & Pizzo, V. G. (1996). A question of balance: case studies in strategic knowledge management. *European management journal*, 14(4), 338-346.
- Guzman, G., & Trivelato, L. F. (2011). Packaging and Unpackaging Knowledge in Mass Higher Education - A Knowledge Management Perspective. *Higher Education*, 62(4), 451-465.
- Hansen, M. T. (1999). The search-transfer problem: The role of weak ties in sharing knowledge across organization subunits. *Administrative science quarterly*, 44(1), 82-111.
- Irma Becerra-Fernandez, R. S. (2001). Organizational knowledge management: A contingency perspective. *Journal of management information systems*, 18(1), 23-55.
- Jahani, S., Ramayah, T., & Effendi, A. A. (2011). Is Reward System and Leadership Important in Knowledge Sharing among Academics? *American Journal of Economics and Business Administration*, 3(1), 87-94.

- Kidwell, J. J., Vander Linde, K., & Johnson, S. L. (2000). Applying Corporate Knowledge Management Practices in Higher Education. *Educause quarterly*, 23(4), 28-33.
- Lee, H., & Choi, B. (2003). Knowledge Management Enablers, Processes, and Organizational Performance: An Integrative View and Empirical Examination. *Journal of management information systems*, 20(1), 179-228.
- Lee, S. (2009). *The impact of knowledge management practices in improving student learning outcomes.* Durham University.
- Liebowitz, J. (1999). Knowledge management handbook: CRC press.
- Mathew, M., Kumar, D., & Perumal, S. (2011). Role of Knowledge Management Initiatives in Organizational Innovativeness: Empirical Findings from the IT Industry. *Vikalpa*, 36(2), 31-42.
- McKenzie, J., Truc, A., & van Winkelen, C. (2001). Winning Commitment for Knowledge Management Initiatives. *Journal of Change Management*, 2(2), 115-127.
- Meireles, A., Cardoso, L., & Albuquerque, A. (2010). The Second Generation of Knowledge Management: An Analysis of the Relationship between Professional Training and Knowledge Management. Paper presented at the The Proceedings of the 2nd European Conference on Intellectual Capital.
- Moss, G., Kubacki, K., Hersh, M., & Gunn, R. (2007). Knowledge Management in Higher Education: A Comparison of Individualistic and Collectivist Cultures. *European Journal* of Education, 42(3), 377-394.
- Namdev Dhamdhere, S. (2015). Barriers of Knowledge Management in the Higher Educational Institutes. *Turkish Online Journal of Distance Education*, *16*(1), 162-183.
- Nyström, H. (1990). *Technological and market innovation: Strategies for product and company development*: Wiley Chichester.
- O'Dell, C., & Jackson Grayson Jr, C. (1999). Knowledge transfer: discover your value proposition. *Strategy & Leadership*, 27(2), 10-15.
- Okyere-Kwakye, E., & Nor, K. M. (2011). Individual Factors and Knowledge Sharing. *American* Journal of Economics and Business Administration, 3(1), 66-72.
- Petrides, L. A., & Nodine, T. R. (2003). Knowledge Management in Education: Defining the Landscape.

- Rahman, B. A. (2004). Knowledge Management Initiatives: Exploratory Study in Malaysia. *Journal of American Academy of Business*, 4(1/2), 330-335.
- Ramayah, T., Yeap, J. A., & Ignatius, J. (2013). An Empirical Inquiry on Knowledge Sharing among Academicians in Higher Learning Institutions. *Minerva*, 51(2), 131-154.
- Sarawanawong, J., Tuamsuk, K., Vongprasert, C., & Khiewyoo, J. (2009). *Development of a strategic knowledge management model for Thai universities*. Paper presented at the Proceedings of the Asia-Pacific Conference on Library & Information Education & Practice.
- Sarvary, M. (1999). Knowledge management and competition in the consulting industry. *California management review*, 41(2), 95-107.
- Scott, J. E. (1998). Organizational knowledge and the intranet. *Decision Support Systems*, 23(1), 3-17.
- Şerefoğlu, H., Durmaz, N., & Gürbüz, T. (2008). Knowledge Management in Higher Education: An Overview of Practices in a Department at METU. *Paper presented at the 8th International Educational Technology Conference (IETC2008)*, 260-1265.
- Vicari, S., & Troilo, G. (2000). Organizational creativity: a new perspective from cognitive systems theory *Knowledge Creation* (pp. 63-88): Springer.
- Walsham, G. (2001). Knowledge management:: The benefits and limitations of computer systems. *European management journal*, *19*(6), 599-608.
- Zack, M., McKeen, J., & Singh, S. (2009). Knowledge Management and Organizational Performance: An Exploratory Analysis. *Journal of Knowledge Management*, 13(6), 392-409.
- Zander, U., & Kogut, B. (1995). Knowledge and the speed of the transfer and imitation of organizational capabilities: An empirical test. *Organization science*, *6*(1), 76-92.