Knowledge Dissemination in Telecom Industry: A Case of Nepal

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ABSTRACT

This study attempts to evaluate knowledge dissemination in the Nepalese telecom industry. It is based on cross section analysis of 85 observations for analyzing relationship between knowledge dissemination statuses in Nepalese telecom industry. The study is based on Kohli et al. (1993) and Daroch (2003) methodologies. Survey instruments are organized into one part and four factors. Spearman Rank Correlation, Analysis of variance (ANOVA), Cronbach's alpha etc. is used for data analysis. The valid response rate of 70.7 % is found. Among the factors that designed for knowledge dissemination and combination has less mean score and socialization has higher mean score than the other factors. In case of socialization, Nepalese Telecom industry analyzes the social contribution of their products or services. Employees of Nepal Telecom has rated higher mean value in knowledge dissemination practices, which means Nepal Telecom appeared better in knowledge dissemination practices than Ncell. There is a significant difference between Nepal Telecom and Ncell in term of knowledge dissemination. Nepal Telecom has better KD (Knowledge Dissemination) practices. The correlation matrix is created to determine the extent to which the components or research variables are related.

Keywords: Knowledge dissemination, externalization, socialization, combination, internalization

Introduction

With roots in a number of disciplines, including business, economics, psychology, and information management, knowledge management is currently a fast expanding interdisciplinary business model (Rafeeq et al., 2014). Knowledge management is the ultimate competitive advantage for today's business. In an organization, people, technology, and processes are all part of knowledge management (Nonaka & Takeuchi, 1995). Knowledge, according to Alavi and Leider (2001), is a validated personal conviction. It improves a person's ability to behave effectively. Correspondingly, Sveiby (1997) claimed in one study that knowledge is an ethereal property that lives inside the individual's thoughts.

Polanyi (1967) claimed, in one study, that knowledge might be either explicit or tacit. Explicit knowledge is expressed in numbers and words that may be conveyed officially and methodically in the form of data and manuals. Explicit knowledge, according to Connell, Klein, and Powell (2003), is about knowing something. Insights, intuition, and hunches are examples of tacit knowledge, according to the researchers. They're hard to define and convey because they're generally based on personal experience. This study is focused on information dissemination in the Nepalese telecom industry.

Problem Statement

The public sector makes use of knowledge management enterprises to provide public services rather than to generating financial benefit. Consistent with Darroch (2003), knowledge dissemination is presented in four parts: socialization, externalization, combination and internalization. Based on the above description, the specific research challenges addressed by this work are as follows:

- What are people's perspectives on the advantages, issues, responsibilities, and technology elements of knowledge management in the telecom industry?
- What relationships exist between knowledge dissemination (KD) approaches in the Nepalese telecoms industry?
- What are the knowledge dissemination (KD) techniques in the telecom industry?

Research Questions

In the present study, these research queries assist as the foundation for the descriptive research design.

- What are the characteristics of KD activities in Nepal's telecommunications industry?
- What is the present state of knowledge dissemination approaches in Nepalese telecommunications sector?
- What distinguishes KD practices in the Nepalese telecom industry?
- Is there a significant difference in knowledge dissemination techniques between the private and public sectors of telecommunications?
- What is the connotation between knowledge dissemination approaches in Nepal's telecoms sector?

Research Objectives

Based on the above rationale, the following are the primary objectives of this study:

- To research knowledge dissemination procedures in the Nepalese telecom sector.
- Obtaining detailed info as to how knowledge be shared in the telecommunications industry.
- To assess the link between Nepalese telecom sector knowledge dissemination approaches.
- To investigates the perspectives of Nepalese telecom personnel on knowledge dissemination.

Research Concept

In two methods, this study investigates the role of good knowledge management in the Nepalese telecom business. First, the study investigates telecom perceptions perspectives and usage of knowledge management. Second, a positive link within the components of knowledge dissemination will be presented in this study. Knowledge management is divided into three elements, according to Darroch (2003) distinguishes knowledge acquisition, knowledge dissemination, and knowledge responsiveness. Knowledge dissemination is regarded as an independent variable in this research study.

Review of Literature

Knowledge management is becoming increasingly important in corporate enterprises these days (Chase, 1997). At various levels, there are many approaches for creating and distributing knowledge (Nonaka and Takeuchi, 1995). In an empirical research in a Malaysian public organization, Syed-Ikhsan and Rowland (2004) explored and assessed the availability of a knowledge management approach. They contended that views of the advantages, difficulties, responsibilities, and technology components of knowledge management in businesses.

In another study, Liebowitz and Beckman (1998) investigated how knowledge management may establish and cultivate a knowledge transfer atmosphere in a corporation in another research. Liebowitz and Beckman (1998) observed numerous particular barriers to knowledge exchange in government agencies. They noted that government bodies are frequently hierarchical and administrative, making knowledge

sharing hard. Wiig (2002) also did extensive research on knowledge management in government. Wiig investigated how information management may play an important role in public administration, concentrating on four major areas: Wiig (2000). Al-Athari and Zairi performed yet another research study on knowledge management in both the commercial and governmental sectors (2001).

Liebowitz and Beckman (1998) did another research on knowledge management difficulties in government organizations. They looked into just how knowledge management may assist a corporation establish a culture of information sharing. How do you assess how well a company's knowledge-sharing initiatives are carried out? In a study, Liebowitz and Beckman (1998) revealed that the business had a somewhat superior knowledge management system and information processes, but that it lacks organizational acceleration and capacity.

Table 1

A List of Some Important KD Practices Researches

KM Practices	Empirical Study	Results
Knowledge Dissemination:		
Knowledge dissemination in general.	Tang (1999)	Positive
Inter-functional coordination.	Abbey (1983), Larker (1997)	Positive
Human resources practices.		
Codifying or making knowledge explicit.		
Mavando (1999)	Positive	
Having enough time to think about ideas.	Abbey (1983), Miner (1997)	Mix result

Methodology of Research

Research Design

This study is mostly descriptive research, and it is carried out using a survey of descriptive cumulating strategy to analyze and assess knowledge accessibility dissemination techniques in Nepal's telecommunications industry.

In order to uncover knowledge dissemination practices, a huge volume of literature is studied. A well-organized set of questionnaires is utilized to collect survey data from a large number of respondents' workers. The instrument is developed to test a firm's ability to communicate market information and is built on the competitive strategy of Kohli-Jaworski mechanism (Kohli, Jaworski & Kumar, 1993).

Population and Sample

All telecom industry firms participated in this survey, public as well as private, are measured Nepal Telecom and Ncell were chosen as sample organizations for the population public and private respectively. This study uses a cross-sectional analysis of 85 observations to examine the link between the states of knowledge dissemination (KD) practices in the Nepalese telecommunications sector.

Nature and Sources of Data

The study relied heavily on primary data, which was mostly gathered through questionnaires.

Method Analysis

This study surveys Kohli et al. (1993) and Daroch's technique to a large extent (2003). In this research, organizations are divided into two categories: public as well private. The assessment tools are arranged into twenty-five knowledge dissemination components.

Knowledge Dissemination Practices and Measures: Four observable component i.e. socialization,

externalization, combination, and internalization has been used to obtain the characteristics of knowledge dissemination practices.

Knowledge Dissemination: Based on four knowledge dissemination-related questions from the employee survey, this is really the constructed measurement knowledge dissemination that is an indicator (Socialization, Externalization, Combination, and Internalization).

Organizational and Respondent Sharing

The table below depicts the frequencies distribution of responders for each organization.

Table 2

Table of Responder Ratio for NTC (Public) with NCELL (Private)

Telecom industry	Ratio	Percentage	Valid Percentage	Cumulative Percentage
Nepal Telecom	61	71.76	71.76	71.76
Ncell	24	28.24	28.24	100.0
Total	85	100.0	100.0	

According to table 2, Nepal Telecom accounts for 71.76 % respondents, whereas Ncell accounts for 28.24 %.

Statistical Instruments Used

Spearman Rank Correlation., Analysis of variance (ANOVA), Cronbach's Alpha (Cronbach's, 1951).

Methods of Data Collection and Analysis

In all, 120 inspection questionnaires are delivered, with an acceptable response rate of 70%, which is sufficient for data analysis. The survey item is designed to elicit respondents' self-reported attitudes; 5 = specifies strongly agree, while 1 = specifies strongly disagree.

Reliability Test

Survey participants submitted the 153 full and filled-out questionnaires. With 25 factors included, the aggregate Cronbach's alpha value becomes 0.707.

Table 3

Cronbach's Alpha

Knowledge Dissemination in the Nepalese Telecommunications Industry	0.707
Socialization	0.815
Externalization	0.811
Combination	0.72
Internalization	0.74

Analysis of Knowledge Dissemination in Nepalese Telecom Industry

Knowledge dissemination which is based on the four factors with 25 questions concerning to socialization, externalization, combination and internalization.

Table 4

Descriptive Analysis of Knowledge Dissemination

Definition	Mean	Std.	Alpha
Knowledge Dissemination	3.63		0.707
Socialization	3.70	.40	
Externalization	3.65	.65	
Combination	3.40	.81	
Internalization	3.54	.50	

Table 4 depicts the Knowledge Dissemination in the Nepalese telecommunications sector, having a cumulative average score of 3.63 for the KD variable. Between the elements intended at knowledge dissemination, socialization scores highest mean value 3.70, with the standard deviation 0.40, which is more than average.

Knowledge Dissemination

Knowledge dissemination which is based on the four factors with 25 questions concerning to socialization, externalization, combination and internalization:

Table 5

Descriptive Analysis of Knowledge Dissemination

Definition	Mean	Std.	Alpha
Knowledge Dissemination	3.63		0.707
Socialization	3.71	.41	
Externalization	3.65	.65	
Combination	3.40	.81	
Internalization	3.54	.50	

Table 5 represents the Knowledge Dissemination in the Nepal's telecommunications sector, having a cumulative average score of 3.63 for the KD variable. Between the elements intended for knowledge dissemination, socialization scores highest mean value 3.71, with the standard deviation 0.41, which is more than average.

Table 6

Descriptive Analysis of Socialization

Definition	Mean	Std.	Alpha
Socialization	3.70	0.40	0.815
We encourage job rotation within our organization.	3.41	0.79	
We attract employees trained in different areas	3.69	0.74	
Many of our employees have worked for our organization for a long time.	4.21	0.78	
We encourage employees to take time to think about our business.	3.75	0.70	
Employees often have informal discussion on business matters.	3.44	0.79	
Our workspace is set up to make it easy for people to talk to each other.	3.46	1.01	
Each department has regular formal meetings.	3.99	0.77	
We encourage people with similar interests to work together to solve a problem.	3.84	0.63	
We use technique such as brainstorming in our organization.	3.61	0.94	

Definition	Mean	Std.	Alpha
Employees are expected to provide feedback to others whenever they attend conferences, seminars or exhibitions.	3.71	0.88	
Our organization encourages mentoring or coaching	3.72	0.67	
Our supervisors deliver seminars or presentations to the rest of the staff	3.75	0.93	
There is cooperation among employees to get things done.	3.60	0.69	

N=85, F statistic=8.131, sig= 0.000

In the above table 6 the composite mean of socialization scores 3.70 by standard deviation 0.40, which is more than average. This means there is positive sign of sharing the experience and knowledge among the employees in Nepalese telecom industry. The question each department has regular formal meeting has high mean value 3.99, which shows that telecom industry has regular formal meetings in their departments to share their experience and knowledge. It also shows that there is cooperation among employees to get thing done.

Table 7

Descriptive Analysis of Externalization

Definition	Mean	Std.	Alpha
Externalization	3.65	0.65	0.811
Employees are encouraged to attend training seminars and conferences.	4.15		
Employees are encouraged to undertake university or professional courses.	3.50		
Employees are encouraged to take the time to study publications to which our organization subscribes.	3.84		
We frequently use the Internet as a source of ideas.	3.54		
We make good use of Intranet to share information on products and processes within the organization.	3.16		

N=85, F statistic=28.296, sig= 0.000

In the above table 7, externalization factor has composite mean of 3.65 by standard deviation 0.65, which suggests that Nepalese telecom industry has average condition in disseminating the knowledge. Among the five constructs developed under knowledge externalization, the question "employees are encouraged to attend training seminars and conferences" has high mean value 4.15. This means telecom encourages the employees to attend training, seminars and conferences to articulate the knowledge and experiences among people.

Table 8

Descriptive Analysis of Combination

Definition	Mean	Std.	Alpha
Combination	3.40	0.81	0.72
We periodically circulate documents (e.g. reports and newsletters) about our business to external stakeholders.	3.19	1.25	
We keep database of customer information that is easy to access.	3.61	0.72	

N=85, F statistic=9.947, sig= 0.002

Combining various bodies of explicit knowledge is what the factor "combination" entails. In this construct the composite mean is 3.34 which suggest that telecom has average procedures in combination for knowledge dissemination practice. The factor combination consists two constructs. The first construct

has less mean value 3.19 as compared to second construct. This means Nepalese telecom organization is poor in circulating the documents about their business to external stakeholders but they are good in keeping database of customer information that is easy to access.

Table 9

Descriptive Analysis of Internalization

Definition	Mean	Std.	Alpha
Internalization	3.54	0.50	0.74
We encourage learning by doing in our organization	3.86	0.72	
We frequently update policy and procedural manuals.	3.81	0.62	
Information about customers' satisfaction is disseminated to all level of our organization on a regular basis.	3.41	0.64	
We record internal best practices	3.45	0.83	
We develop metaphors and analogies to describe what we know.	3.18	0.91	

N=85, F statistic=17.609, sig= 0.000

The factor internalization is the process of experience knowledge through the explicate source. It has a lot to do with learning by doing. The above results show the positive aspects in internalization factor of knowledge dissemination in Nepalese telecoms as its composite mean value that is more than average 3.54 with standard deviation 0.50 (F = 17.60 and sig = 0.000).

The factor internalization comprises five constructs; among them the question "we encourage learning by doing in our organization" has high mean value 3.86. This means telecoms encourage the employees the learning by doing in their organization. The Nepalese Telecom is poor in developing the metaphors and analogies to describe what they know (Mean = 3.18).

To sum up, from above presentation and analysis, Nepalese telecom has good practices of socialization in knowledge dissemination. It means telecoms attract employees trained in different areas. It is also found that many of their employees have worked for their organization for a long time. But the results show that employees do not have informal discussion on business matters in telecoms of Nepal. The factor 'combination' involves combining different bodies of explicit knowledge. Combination is typical in information processing situations and might include reconfiguring existing knowledge bases through sorting, adding, combining and categorizing explicit knowledge. As a result, databases and computerized communication networks will be heavily used in combination, as these will make the capturing, storing, retrieving, and transmitting of codified knowledge in telecommunication sector.

Knowledge Dissemination (KD) Practices in Nepal Telecom and Ncell

The study also aims to know the difference in the perception of employees from Nepal Telecom and Ncell. There are 61 Nepal Telecom respondents and 24 Ncell respondents. The four elements, namely socialization, externalization, internalization and combination are used to assess knowledge dissemination techniques in Nepal's telecommunications sector. Each factor has a set of structured questionnaire designed and administered to get the opinions of respondents. The following table shows the descriptive results of the KD practices in Nepal Telecom and Ncell.

Table 10

Analysis of Knowledge Dissemination (KD) Variances

Factors	Organizations	N	Mean	Std.	F	Sig.
Socialization	Nepal Telecom	61	3.78	0.42		
	Ncell	24	3.49	0.26	9.77	0.002
	Total	85	3.70	0.40		
Externalization	Nepal Telecom	61	3.71	0.71		
	Ncell	24	3.50	0.47	1.79	0.18
	Total	85	3.65	0.65		
Combination	Nepal Telecom	61	3.47	0.84		
	Ncell	24	3.20	0.72	1.84	0.17
	Total	85	3.40	0.81		
Internalization	Nepal Telecom	61	3.62	0.53		
	Ncell	24	3.31	0.31	7.14	0.00
	Total	85	3.54	0.50		

Table 10 shows the general description and analysis of variance of four factors of knowledge dissemination. The result reveals that Nepal Telecom has better knowledge dissemination practice than Ncell in general. However, the mean scores do not show more fluctuation in these regards. The data set indicates that of the four practices, only two components socialization and internalization show significant different (at the 0.05 significance level) by the Nepal Telecom and Ncell.

It is difference apparent that socialization and internalization differ significantly at the 0.05 level of significance. Thus, it can be concluded that there are different levels of socialization and internalization processes of knowledge dissemination practices in Nepal Telecom and Ncell. In comparison to Ncell, Nepal Telecom has a greater level of knowledge dissemination practices. Similarly, the data set indicates that of the four practices, two components externalization and combination have on significant difference ($p > 0.01$) by Nepal Telecom and Ncell. It suggests that there are similar practices in the processes of externalization and combination.

Correlation among the Factors of Study Variables

Four factors describe the knowledge dissemination construct: socialization, externalization, combination and internalization. Thus, the following table shows the relation among the different factors of study variables. Thus, the correlation between the relevant factors is summarized in the table 11.

Table 11

Correlation among Knowledge Dissemination Factors

Variables	Socialization	Externalization	Combination	Internalization
Socialization	1			
Externalization	.550**	1		
Combination	.552**	.684**	1	
Internalization	.595**	.508**	.541**	1

** At the 0.01 level, correlation is significant (2-tailed).

Observing the Table 11, it is to mention here that all the elements of knowledge dissemination are positively interrelated with one another. Similarly, the indicators of KD practices are positively connected with one another. Socialization has positive relation with externalization (r= 0.550, α> 0.01), combination (r =0.552, α> 0.01) and internalization (r=0.595, α> 0.01). Externalization has positive relation to combination (r =0.684, α> 0.01) and internalization (r= 0.508, α> 0.01). Similarly, the combination has positive relation

to the internalization process (r =0.541, α> 0.01). According to the findings, there is a positive association between the knowledge dissemination variable under knowledge dissemination practices of Nepalese telecom industry.

Conclusions

Knowledge dissemination in Nepalese telecom industry is found in average level. Among the factors that designed for knowledge dissemination, socialization was considered as good practice among others. The construct "There is cooperation among employees to get things done" has a lower mean score than the other constructions in the socializing component. This fact presented that Nepalese telecom industry must be aware in developing cooperation among employees to get things done. In case of Externalization process, the construct "we make good use of Intranets to share information on products and processes within the organization" has less mean score which reflects that Nepalese telecom industry should be aware in making good use of Intranets to disseminate the information on products and processes within their organization. In the Internalization process, the construct "we build metaphors and analogies to describe what we know" gets a lower mean score than the other constructions. It means that there is still need to develop metaphors and analogies to describe what Nepalese telecom industry know. The factor Combination has less mean score than other factor which was found in neutral label. Due to this reality, the Nepalese telecom sector should be aware of the importance of keeping an easily accessible database of customer information and publishing documents regarding their operations to external parties.

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