

---

PROCEEDINGS OF  
**ACADEMICERA**  
**3<sup>rd</sup>INTERNATIONAL CONFERENCE**  
**JAKARTA, INDONESIA**

---

ISBN- 978-93-86083-34-0

*Organized by*



**Date of Event:**  
**13<sup>th</sup>-14<sup>th</sup> March 2017**

**Event Co-Sponsored by**



**Corporate Address**

**IRAJ Research Forum**

Institute of Research and Journals

Plot No- 161, Dharma Vihar, Khandagiri, Bhubaneswar, Odisha, India

Mail: [info@iraj.in](mailto:info@iraj.in), [www.iraj.in](http://www.iraj.in)

Publisher: **IRAJ**

© 2017, Academicsera International Conference, Jakarta, Indonesia

No part of this book can be reproduced in any form or by any means without prior written permission of the publisher.

**ISBN- 978-93-86083-34-0**

**Edtn: 25**

**Type set & printed by:**

**R. K Printers**  
Bhubaneswar, India

### **About IRAJ Research Forum (IRF):**

The *IRAJ Research Forum* is an International non-profit academic association under 'Peoples Empowerment Trust' with the stated goals of promoting cooperation among scientists, defending scientific freedom, encouraging scientific responsibility, and supporting scientific education and science outreach for the betterment of all humanity. It is the one of the world's largest and most prestigious general scientific society.

### **Objective of IRF:**

- ❖ To provide a world class platform to researchers to share the research findings by organizing International/National Conferences.
- ❖ To use the research output of the conference in the class room for the benefits of the students.
- ❖ To encourage researchers to identify significant research issues in identified areas, in the field of Science, Engineering, Technology and Management.
- ❖ To help dissemination of their work through publications in a journal or in the form of conference proceedings or books.
- ❖ To help them in getting feedback on their research work for improving the same and making them more relevant and meaningful, through collective efforts.
- ❖ To encourage regional and international communication and collaboration; promote professional interaction and lifelong learning; recognize outstanding contributions of individuals and organizations; encourage scholar researchers to pursue studies and careers in circuit branches and its applications.
- ❖ To set up, establish, maintain and manage centers of excellence for the study of /on related subjects and discipline and also to run self supporting projects for the benefit of needy persons, irrespective of their caste, creed or religion.

### **About ACADEMICSERA:**

**Academicsera** is a **non-profit organization** that promotes the Engineering and Technology, related latest developments and issues to be discussed and experimented through interactions amongst the researchers and academician across the globe at a common platform in association with **The IIER**.

## Conference Committee

### Program Chair:

#### **Dr. P. Suresh**

M.E, Ph.D. Professor and Controller of Examinations,  
Karpagam College of Engineering.,  
Coimbatore, India

#### **Zarrin Nasri**

Iranian Research Organization for Science and Technology (IROST),  
Tehran, Iran

### Conference Manager:

#### **Mr. Bijan Kumar Barik**

Mob: +91-9776047497

### Conference Convener:

#### **Miss. Jayashree Acharya, The IIER**

Mob: +91- 9007375847

#### **Miss. Manaswini Patra, Academicsera**

Mob: +91- 7200720818

### Publication and Distribution Head:

#### **Mr. Manas Ranjan Prusty, IRAJ, India**

## INTERNATIONAL ADVISORY MEMBERS

#### **Prof. Goodarz Ahmadi,**

Professor, Mechanical and Aeronautical Engineering, Clarkson University, USA

#### **Dr Chi Hieu Le,**

Senior Lecturer, University of Greenwich. Kent ME4 4TB. United Kingdom

#### **PROF. (ER.) Anand Nayyar**

Department of Computer Applications & I.T.KCL Institute of Management and Technology, Jalandhar  
G.T. Road, Jalandhar-144001,Punjab, India.

#### **Prof. R. M. Khaire,**

Professor, Dept. Of Elex. and Telecommunication, B, V University, India

#### **Dr.P.Suresh,**

Professor, Karpagam College of Engineering, Coimbatore, Tamilnadu

#### **Mark Leeson**

Associate Professor (Reader)

Area of Expertise: nanoscale communications,  
evolutionary algorithms, network coding and communication systems

#### **Dr. P. K. Agarwal**

Professor, Deptt. of Civil Engineering, MANIT Bhopal ,Ph. D: IIT Kanpur

M.E: Civil Engg.IIT Roorkee, Membership: Indian Road Congress (IRC), Institute of Urban Transport (IUT)

#### **Shahriar Shahbazpanahi**

Islamic Azad University,

Department of Civil Engineering, Sanandaj, Kurdistan, Iran, PhD (Structural Engineering),

University Putra Malaysia, Malaysia

**Harun Bin Sarip**

Head of Research and Innovation Dept, UniKL-MICET  
Doctorate: Université de La Rochelle, France  
Member: International Society of Pharmaceutical Engineer, Singapore Chapter

**Dr. Buchari Lapau**

Professor ,Pekanbaru Hang Tuah Institute of Health (STIKes HTP),  
Riau, Indonesia

**Dr. Bilal Ali Yaseen Al-Nassar**

The World Islamic Sciences and Education University (WISE)  
Faculty of Business and Finance  
Department of Management  
Information System (MIS), Amman- Jordan

**Dr. Md. Al-Amin Bhuiyan**

Associate Professor  
Dept. of Computer Engineering  
King Faisal University  
Al Ahssa 31982, Saudi Arabia

**Prof. (Er.) Anand nayyar**

Department of Computer Applications & I.T.  
KCL Institute of Management and Technology, Jalandhar  
G.T. Road, Jalandhar-144001  
Punjab, India

**Prof. Aleksandr Cariow**

institution or Company: West Pomeranian University of  
Technology, Szczecin

**Dr. P. K. Agarwal**

Professor, Deptt. of Civil Engineering, MANIT Bhopal ,Ph. D: IIT Kanpur  
M.E: Civil Engg.IIT Roorkee, Membership: Indian Road Congress (IRC), Institute of Urban Transport (IUT)

**Dr. VPS Naidu**

Principal Scientist & Assoc. Prof., MSDF Lab, FMCD  
CSIR - National Aerospace Laboratories, Bangalore, India

**Mr. P. Sita Rama Reddy**

Chief Scientist ,Mineral Processing Department, CSIR - Institute of Minerals & Materials Technology  
Bhubaneswar, India, M.Tech. (Chem. Engg., IIT, KGP)

**Dr.P.C.Srikanth,**

Professor & Head, E&C Dept, Malnad College of Engineering, Karnataka  
Senior Member IEEE, Secretary IEEE Photonics Society,  
M.Tech: IIT, Kanpur, Ph.D: In IISc Photonics lab

**Prof. Lalit Kumar Awasthi,**

Professor, Department of Computer Science & Engineering  
National Institute of Technology(NIT-Hamirpur),  
PhD, IIT, Roorkee, M. Tech, IIT, Delhi

**Dr. Chandra Mohan V.P.**

Assistant Professor, Dept. of Mech. Engg., NIT Warangal,  
Warangal. Ph.D : Indian Institute of Technology(IIT),Delhi  
M.B.A: Alagappa University

**Prof. I.Suneetha,**

Associate Professor, Dept. of ECE, AITS, Tirupati, India

**Dr.s. Chandra Mohan Reddy,**

Assistant Professor (SG) & Head, Dept. of Electronics & Communication Engineering, JNTUA College of Engineering, Pulivendula, Ph.D, J.N.T. University Anantapur, Anantapuramu

**Gurudatt Anil Kulkarni,**

I/C HOD E&TC Department, MARATHWADA MITRA MANDAL'S POLYTECHNIC

**Pasuluri Bindu Swetha**

Dept. Of ECE, Stanley college of Engineering & Technology for Women, Hyderabad, India

★ ★

# TABLE OF CONTENTS

SI No	TITLES AND AUTHORS	Page No.
01.	<b>Noise Source Identification of Vacuum Cleaner Using Sound Pressure-Velocity (PU) Probe</b> ➤ <i>Hashim U. Alyaa, A. Aminudin, Thiha zaw, Waziralilah N. Fathiah, T. Vikneshvaran, Shukor D. Shakirah</i>	1-4
02.	<b>Active Noise Cancellation in The Rectangular Enclosure Systems</b> ➤ <i>D. Shakirah shukor, Aminudin Abu, Azella aziz wong, U. Alyaa hashim, N. Fathiah waziralilah, Vikneshvaran T.</i>	5-9
03.	<b>Experimental Analysis on Structure-Borne Noise in an Enclosure</b> ➤ <i>N. Fathiah waziralilah, Aminudin abu, Nor'azizi bin othman, Sanda pyae sone, U.alyaa hashim, D. Shakirah shukor, Vikneshvaran</i>	10-14
04.	<b>Study on Numerical Analysis of High Rise Building</b> ➤ <i>Vikneshvaran, A.aminnudin, Hashim u.alyaa, Waziralilah n. Fathiah, Shukor d. Shakirah, A.afham</i>	15-18
05.	<b>An Investigation of Health Sector Web Applications In Bangladesh: A Case Study on Cross Site Scripting</b> ➤ <i>Samantha Haque, Touhid Bhuiyan</i>	19-23
06.	<b>Market Reactions Toward Mergers and Acquisitions Announcement in Telecommunication Firms Listed in Asia-Pacific Stock Markets</b> ➤ <i>Nurul Fithri Sylvani, Irni Yunita</i>	24-28
07.	<b>Influencing Factors to Increase Netizen Intention Toward Online Display Advertising from Indonesia E-Commerce Company</b> ➤ <i>Verdy firman s.ikom, Maya ariyanti se., mm.</i>	29-33
08.	<b>Comparative Study Between Online Native Advertising and Online Banner Advertising Consumer's Behavior Toward Online Advertising</b> ➤ <i>Sitiaisyah, S. I. Kom, mm, Maya ariyanti, se., mm</i>	34-39
09.	<b>Communication Strategy To Improve Employee Performance (case study pt. Pjb in surabaya)</b> ➤ <i>Hayuning Purnama Dewi</i>	40-45
10.	<b>Application of Microwave Technology in Asphaltene And Viscosity Reduction of Iranian Vacuum Residue</b> ➤ <i>Zarrin Nasri</i>	46-49
11.	<b>Knowledge Sharing And Innovation Capability: Insigth From An Indonesian Company</b> ➤ <i>Melva Irene Damanik, Ade Irma Susanty</i>	50-53

## **EDITORIAL**

It is my proud privilege to welcome you all to the Academicsera International Conference at Jakarta, Indonesia in association with The IIER. I am happy to see the papers from all part of the world and some of the best paper published in this proceedings. This proceeding brings out the various Research papers from diverse areas of Science, Engineering, Technology and Management. This platform is intended to provide a platform for researchers, educators and professionals to present their discoveries and innovative practice and to explore future trends and applications in the field Science and Engineering. However, this conference will also provide a forum for dissemination of knowledge on both theoretical and applied research on the above said area with an ultimate aim to bridge the gap between these coherent disciplines of knowledge. Thus the forum accelerates the trend of development of technology for next generation. Our goal is to make the Conference proceedings useful and interesting to audiences involved in research in these areas, as well as to those involved in design, implementation and operation, to achieve the goal.

I once again give thanks to the Institute of Research and Journals, Academicsera, TheIIER for organizing this event in Jakarta, Indonesia. I am sure the contributions by the authors shall add value to the research community. I also thank all the International Advisory members and Reviewers for making this event a Successful one.

**Editor-In-Chief**

**Dr. P. Suresh**

M.E, Ph.D. Professor and Controller of Examinations,  
Karpagam College of Engineering.,  
Coimbatore, India.





# KNOWLEDGE SHARING AND INNOVATION CAPABILITY: INSIGHT FROM AN INDONESIAN COMPANY

<sup>1</sup>MELVA IRENE DAMANIK, <sup>2</sup>ADE IRMA SUSANTY

S.A.B.<sup>1)</sup>, MM., Ph.D.<sup>2)</sup>

<sup>1)</sup>Magister Management Department, School of Economic and Business, Telkom University

<sup>2)</sup>Business Administration Department, School of Communication and Business, Telkom University  
Email: melva.irene91@gmail.com, adeirma@telkomuniversity.ac.id

---

**Abstract:** Knowledge sharing has important role in organization, especially in improving their innovation capability. The aim of this study is to determine the effect of knowledge sharing to innovation capability in a company in Indonesia. Knowledge sharing which was measured in this study divided into two kinds of knowledge sharing consist of knowledge donating and knowledge collecting. The method used in this research is descriptive and causal methods. Respondents of this study are 111 permanent employees in an Indonesian company. The Data were collected by using questionnaire that contains 35 statements. The analysis technique uses path analysis. The results shows that simultaneously knowledge sharing has significant effect to innovation capability. Specifically, knowledge donating has a bit higher influence on innovation capability than knowledge collecting.

---

**Keywords:** Knowledge Sharing, Knowledge Donating, Knowledge Collecting, Innovation Capability.

---

## I. INTRODUCTION

One way of managing human resources is to increase the capabilities and competence of those with the knowledge that is widespread in the company, the dissemination of information and knowledge is done through daily discussions as well as through the company's intranet portal. This is known as knowledge management.

Since the beginning of the implementation of knowledge management, knowledge sharing becomes an important element that is closely regulated. Knowledge sharing activities in this company done in two ways; offline and online. Knowledge sharing activities undertaken both offline and online has been doing quite well. To make sure that knowledge sharing activities is always consistently maintained, they make knowledge sharing activities as one of the Key Performance Indicators .

Since the year 2013 - 2014 the activity of knowledge sharing as one of the Key Performance Indicators has been increasing every year. Increased activity of knowledge sharing is also done through Employee Skills Development Program which is routinely done every month. Such improvements should continue to occur considering the year 2015 in which the world economy was running extremely slow and export import trade transactions was much lower than in previous years so there are very high demands of necessary professionalism of employees to meet these challenges.

Several previous studies have emphasized the importance of the role of knowledge sharing in enhancing employee innovation. Among them Lin (2007: 315-332) whose research examines the factors of knowledge sharing based on knowledge sharing enabler that describes the individual factors, organizational factors and technological factors that

are correlated with each other and connect them with innovations in Taiwanese companies.

Research by Liao et.al. (2006: 340-359) suggests that the knowledge sharing processes which are knowledge donating and knowledge collecting have a significant influence on the company's innovation capability in Taiwan. Wang and Wang (2012: 8899-8908) also states that the knowledge sharing that is tacit and explicit also have an influence on innovation. Based on these studies, it can be concluded that knowledge sharing aim to create innovative ideas that can be shared and upgraded to new knowledge.

In carrying out its vision and mission, the company in also requires innovation breakthroughs to simplify the process of service to the public. Various forms of innovation has been carried out like Bravo BC 1500225 Contact Center, Service User Satisfaction Electronic Survey, BC Bandung Mobile Applications, Systems and Applications Customs Post . The various forms of innovation are derived from the ideas of employees which are then customized with applicable regulations and coordinated again through the headquarters.

## 2. Basic Theory, Framework, and Methodology

### 2.1 Basic Theory

#### A. Knowledge Sharing

Studies on knowledge management developed rapidly at least since European management conference declared it in 1986 that knowledge was vital in building the competitive edge of an organization. Knowledge in an organization, therefore, has to be managed systematically to achieve business benefits (Ahmed, Lim & Loh, 2004). Knowledge is a fluid mix of framed experience, values, contextual information and expert insight that provides a framework for evaluating and

incorporating new experiences and information (Davenport & Prusak, 1998). Knowledge can be in form of tacit (tacit knowledge) which lies in the heads or minds of people because they cannot explain it, but they use it; and the other one is in the form of explicit (explicit knowledge) which has been explained systematically in the forms of words, diagrams, or other forms for people to understand (Nonaka & Takeuchi, 1995 & Nonaka & Konno, 1998). Transforming the tacit knowledge into explicit knowledge is not that easy, it requires certain techniques which are culturally bound. Studying the transformation of tacit knowledge into explicit knowledge in Japan, Nonaka & Takeuchi (1995) developed a model as visualized in Figure 1. In the model, the transformation of 'ba' (ba = context) involves several factors: place (including condition which may affect one's way of thinking), social, history, and hierarchy.

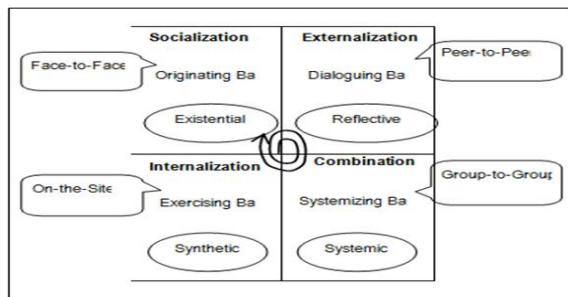


Figure 1. Four Types of Ba

Source :Nonaka & Konno (1998)

The development of studies on knowledge management has revealed several models available in the literature, and knowledge sharing is one of the important aspects of knowledge management. One most widely used model of knowledge management is formulated by Dalkir (2005). The model consists of four aspects as visualized in Figure 2.

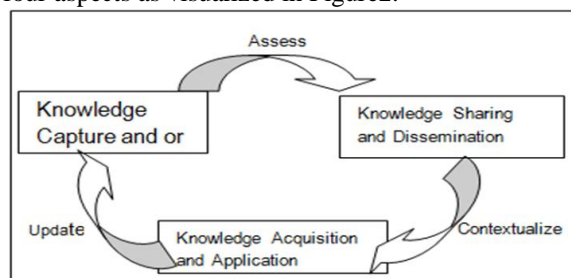


Figure 2. Model of Knowledge Management

As shown in Figure 2, knowledge sharing and dissemination is the process of contextualizing the knowledge into understanding and application of the knowledge. This means that the knowledge that is shared and disseminated is explicit knowledge. There are two dimensions of knowledge sharing, i.e. knowledge donating and knowledge collecting (Hooff & Ridder, 2004).

According to Lin (2007: 315-316) knowledge sharing is defined as a culture of social interaction, which

involves the exchange of knowledge, experience and skills of employees through the entire department or organization. Sharing knowledge occurs at the level of individuals and organizations. For individuals, sharing knowledge is talking with a colleague to help them get things faster, better, and more efficient. For organizations, sharing knowledge is capturing, organizing, reusing, and transferring the experience based on the knowledge that exist in the organization so as to make this knowledge available to others.

Hooff & Ridder (2004: 118) defines that knowledge sharing is a process where individuals exchanging their knowledge (tacit and explicit knowledge). This definition implies that any process of knowledge sharing consists of two things, namely:

1. Knowledge donating, namely how individuals communicate the intellectual capital of the individual to the other and aims to see how the individual knowledge processed into group knowledge, and then proceed into organizational knowledge from time to time.
2. Knowledge collecting, namely how the individual consult with other individuals regarding intellectual capital owned. Also consists of processes and methods for gathering information and knowledge from internal and external resources where organizational knowledge becomes of the group and the individual's knowledge. It involves the internalization and dissemination of knowledge that will eventually become the inventory stock of knowledge to the company.

**B. Innovation Capability**

To be able to show satisfactory performance of the organization, it is necessary to have strategic organizational changes. The workings of organizations that still adhere to the principle of "as before" are no longer sufficient in the future. The organizations that want to increase productivity and effectiveness, which will ultimately deal with problems that arise in the future, requires an innovative way of thinking and acting.

According to Siagian (2007: 258) Innovation may involve the creation of new products (both in terms of goods or services), new structures, new connections and even new culture. However, innovation is not just limited to creating new dimensions or markets but also new services to serve customers who are already established, as proposed by Tidd & Bessant (2009: 3) "... innovation is not just about opening up new markets - it can also offer new ways of serving established and mature ones".

In an effort to create an innovation, the organization need to have the ability (capability) to maximize existing resources, in order to develop the organization into a better direction. Ability itself according Verona in Lawson and Samson (2001: 379) can be divided into two categories, namely the functional capabilities that develop technical

knowledge and integrative capabilities that allow companies to absorb knowledge from external sources and mix of technical competencies developed in the various departments of the company.

There are a lot of descriptions of the capabilities of innovation proposed by the experts. The description of innovation capabilities according to Lawson and Samson (2001: 384) is the ability to sustainably transform knowledge and ideas into various forms of service, process, and a new system for the benefit of the institutions and stakeholders.

On the other hand, the ability to innovate according to Adler & Shekhar in Rahmani & Mousavi (2011: 288) is:

1. The ability to develop products that meet market needs
2. The ability to utilize technology in developing products
3. The ability to develop new products or improve the performance of existing products prior to market needs
4. The ability to master new technologies to create new opportunities

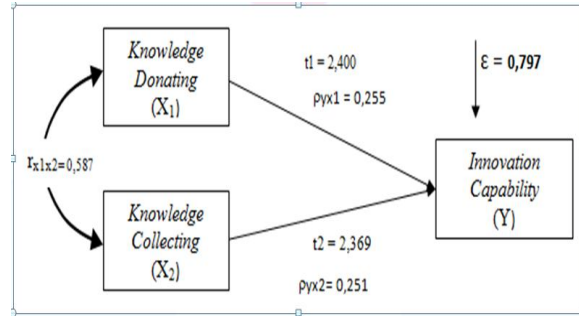
Organizations that innovate are according to the demands of the organizational transformation that is no longer solely organizational development when an organization has not been able to show a satisfactory performance, or are not able to adjust the external environment changes that are so competitive, and scale of the organization that is still small and is growing rapidly.

## II. METHODOLOGY

This study uses quantitative data with three types of research, namely descriptive research, verification, and causal. Descriptive research is used to describe knowledge sharing and innovation capability in the research object to the attention of researchers, research verification is used to test the hypotheses that have been developed researcher, and causal research is used to determine the causal relationship that is affecting between two or more variables. The process of verification and causal calculation is by using statistical computations, using the techniques of path analysis.

## III. RESULTS AND DISCUSSION

Here is a structural model of this research path analysis with two independent variables that significantly influence the innovation capability insight from an Indonesian, which are knowledge donating and knowledge collecting.



Picture1 .Model of the influence of *Knowledge Donating (X<sub>1</sub>)* and *Knowledge Collecting(X<sub>2</sub>)* on *Innovation Capability (Y)*

Based on the figure above, the path analysis structural equation is obtained which is as follows:  $Y = 0,255X_1 + 0,251X_2 + 0,797X_3$ . Next, the following is the value of the influence from each free variable towards the bound variable in this research:

Table 2. Direct Effect, Indirect Effect, and Total Effect From *Knowledge Sharing* towards *Innovation Capability*

Variable	Direct Effect	Indirect Effect		Total Effect
		X1	X2	
X1	6,5 %	0	3,7%	10,2%
X2	6,3%	3,7%	0	10%
Total Effect of X1 and X2 Towards Y				20,2%
Other Variable's Effect Towards Y				79,8%

## CONCLUSION

The effects of knowledge sharing on innovation capability, a number of conclusions are drawn which are as follows:

- a. Knowledge sharing comprised of donating knowledge and knowledge collecting is in the high category with a percentage of 80%. This means that the company has implemented a knowledge sharing process. Employees have the ability to share information / experience / knowledge / ideas with co-workers in a single unit of work and outside work units. Employees are also able to receive the knowledge of co-workers in a work unit and outside unit, covering knowledge of work experience or training, ideas, contextual information, or other knowledge that is considered beneficial for employees and the company.
- b. Employee perceptions this company towards innovation is included in the extremely high category with a percentage of 84.5%. It shows that the majority of employees has the ability to innovate and innovate well already.
- c. Based on the results of the data analysis and hypothesis testing, researchers can deduce that knowledge sharing has a significant influence on innovation capability with the effect of 20.3%. It shows that the innovation capability is not

predominantly influenced by knowledge sharing, but predominantly influenced by factors or other variables not examined in this study such as financial performance, operational performance, motivation, potential absorptive capability, organizational culture, individual engagement.

Based on the research results, analysis and conclusions in this study, the activities of knowledge sharing in this company can be said to a good value of respondents at 80%, showing respondents of high category, but from the results of the analysis, there is one item that has the lowest percentage value, which is about sharing of new knowledge to colleagues in other directorates. then the suggestions that can be given to respond to such matters are as follows:

- a. Improve the provision and management of facilities and support media that can support employees to share their new knowledge with colleagues in different directorates. The company can provide such a facility that provides a variety of food and beverages suitable to relax for a moment, for example in the form of ideas or knowledge corner cafe. Enabling and reinforcing knowledge sharing can also be done through TV or digital screen that displays impressions that are associated with the job, new information or problems in the company, thus indirectly the employees who come will mutually discuss or discuss about the problems aired.
- b. Knowledge Sharing event is still done in a way to share data or information through the database server which is a special portal used for administrative processes, services, supervision, and matters related to the duties and functions of the company. Management need to build a special system knowledge management system where employees can share knowledge more quickly and accurately so that employees have no difficulty in documenting and communicating what has been done. Seeing as the majority of its

employees are among the youth who tend to be less happy with something very formal, so researchers wanted to give suggestion that each employee is given the freedom to engage in knowledge sharing in the form of articles, videos, text descriptions or journal.

## REFERENCE LIST

1. Darkir, K..(2005). Knowledge Management in Theory and Practice. Oxford: Butterworth-Heinemann.
2. Davenport, T.H. & Prusak, L. (1998). *Working Knowledge: How Organizations Manage What They Know*. Boston: Harvard Business School Press.
3. Lawson, B. & Samson, D. (2001). Developing Innovation Capability In Organizations : A Dynamic Capabilities Approach, *International Journal of Innovation Management*, 5 (3): 377-400.
4. Liao, S. H., Fei, W. C., & Chen, C. C., (2007). Knowledge Sharing, Absorptive Capacity and Innovation Capability: An Empirical Study of Taiwans Knowledge-Intensive Industries. *Journal of Information Science*, Vol. 20, No. 10, pp. 1-20.
5. Lin, Hsu-Fen. (2007). Knowledge Sharing and Firm Innovation Capability: an Empirical Study. *International Journal of Manpower*, Vol. 28, NO. 3/4, pp. 315-332.
6. Nonaka, I. & Konno, N. (1998). The Concept of Ba: Building a Foundation for Knowledge Creation. *California Management Review*. 40 (3). 40-54
7. Nonaka, I. & Takeuchi, H. (1995). *The Knowledge Creating Company: How Japanese Companies Create the Dynamics of Innovation*. New York: Oxford University Press
8. Rahmani, Z & Mousavi, S.A. (2011). Enhancing the innovation capability in the organization: A conceptual framework. *The 2<sup>nd</sup> International Conference on Education and Management Technology*, 13, 285-291.
9. Siagian, Sondang, P. (2007). *Manajemen Sumber Daya Manusia*, Edisi Pertama, Cetakan Keempat belas. Jakarta : Bumi Aksara.
10. Tidd, J., & Bessant, J. (2009). *Managing Innovation, Integrating Technological, Market and Organizational Change*, 4 th. Edition. John Willey & Sons, Ltd. New Jersey.
11. Van Den Hooff, B & De Ridder, JA. (2004). Knowledge Sharing in Context : The Influence of Organizational Commitment, Communication Climate and CMC use on Knowledge Sharing. *Journal of Knowledge Management*. Vol. 8 No. 6, 2004 pp. 117-130. Emerald Group.
12. Wang, Z., & Wang, N. (2012). Knowledge sharing, innovation and firm performance. *Expert Systems with Applications*, 39(10), 8899-890.

