THE EFFECT OF ETHNO/LINGO DIVERSITY ON KNOWLEDGE SHARING EFFECTIVENESS AND CONFLICT IN GROUPS

SEYYEDALI ZIAEI

UNIVERSITI TEKNOLOGI MALAYSIA
THE EFFECT OF ETHNO/LINGO DIVERSITY ON KNOWLEDGE SHARING EFFECTIVENESS AND CONFLICT IN GROUPS

SEYYEDALI ZIAEI

A project submitted in fulfillment of partial requirement for the
Award of the degree of Master’s of Management (Technology)

Faculty of Management and Human Resource Development
Universiti Teknologi Malaysia

15 March 2010
To my very first friend and teacher, to whom I owe not only my success and thinking, but my entire life. Mom, love you eternally.
ACKNOWLEDGEMENT

Firstly, I need to thank my supervisor, Associate Professor Dr. Khalil Md Nor sincerely. Not only his valuable critical views helped in completing this project, but also observing him working tirelessly motivated me greatly in the tough moments.

My special thanks go to Associate Professor Dr. Steven Walczak of University of Colorado in Denver, who helped me all the way of doing this project without hesitation.

I am also thankful to the Dean of the Faculty of Management and Human Resource Development of UTM, Associate Professor Dr. Amran Rasli for his great help in statistical analysis of this project.

I am grateful to Professor Geert Hofstede of Maastricht University and Professor Maryam Alavi of Emory University for their encouragement.

I also thank my examiners, Dr. Norhalimah binti Idris and Dr. Norazmi bin Muhammad, whose kind comments helped me correct my approach towards this research at the proposal stage.

I greatly appreciate the help of Professor Sandy Stalpes of Queen’s University who kindly supplied me with a part of his previous research to use in this project.

Last but not least, my sincere thanks go to Dr. Dilek Zamantili Nayir of Marmara University for her helpful guidance at the initial stage of this research.
ABSTRACT

In today’s economy, the role and value of knowledge as the last competitive advantage has been suggested and the Knowledge Management (KM) concept has emerged and received great attention. A big part in KM is about managing the way knowledge flows in and between organizations i.e., managing Knowledge Sharing (KS). While technology admittedly facilitates KS, the success of KM efforts still depends highly on considering human factors. This research proposes that one of these human factors, ethno/lingo diversity, can significantly affect the success of KM practices; in particular knowledge sharing by influencing communication and social interaction among the members of a group. To test this proposition, a semi-quantitative approach was taken. Homogeneous and heterogeneous groups were formed and asked to do a group task that needed discussion and knowledge sharing. By comparing the results in groups based on how diverse they are or simply based on their being homo- or heterogeneous, the hypothesis is tested. Furthermore, as the literature on diversity suggests, conflict is likely to be present and have a role in the diverse group processes. Hence, intragroup conflict is also gauged by means of a questionnaire. Groups were composed of voluntary students of Universiti Teknologi Malaysia. The results show a significant and strong correlation between group diversity and knowledge sharing at group-level, but fail to show any significant relationship at the individual-level, or on conflict. The results imply the effect of social categorization on the willingness of individuals in groups to share knowledge. This way, one can assume positive influence of group homogeneity on knowledge sharing at least over the short term and conversely barriers to KS in the diverse groups. This fact may be borne in minds of managers when setting up groups depending heavily on KS, especially short-term groups and planning them more homogeneous. In long-term groups the effect can be reduced by diversity training or making use of reductive capabilities of information technologies.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>CHAPTER</th>
<th>TITLE</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>DECLARATION</td>
<td>ii</td>
</tr>
<tr>
<td></td>
<td>DEDICATION</td>
<td>iii</td>
</tr>
<tr>
<td></td>
<td>ACKNOWLEDGEMENT</td>
<td>iv</td>
</tr>
<tr>
<td></td>
<td>ABSTRACT</td>
<td>v</td>
</tr>
<tr>
<td></td>
<td>TABLE OF CONTENTS</td>
<td>vi</td>
</tr>
<tr>
<td></td>
<td>LISTS OF TABLES</td>
<td>x</td>
</tr>
<tr>
<td></td>
<td>LISTS OF FIGURES</td>
<td>xi</td>
</tr>
<tr>
<td></td>
<td>LISTS OF SYMBOLS</td>
<td>xii</td>
</tr>
<tr>
<td></td>
<td>LISTS OF APPENDICES</td>
<td>xiii</td>
</tr>
</tbody>
</table>

1. **INTRODUCTION**

1.1 Background of the Research 1
1.2 Concept of Diversity 4
1.3 Statement of Problem 5
1.4 Statement of Purpose 6
1.5 Research Questions 6
1.6 Research Objectives 6
1.7 Scope of the Study 7
1.8 Significance of the Study 9
2. LITERATURE REVIEW

2.1 Introduction 10

2.2 Diversity 11

2.3 Knowledge Sharing 17
   2.3.1 Types of Knowledge 17
   2.3.2 KM and KS 18
   2.3.3 Knowledge Sharing Barriers and Hindrances 19

2.4 Conflict 23

3. RESEARCH METHODOLOGY

3.1 Introduction 26

3.2 Research Design 26
   3.2.1 Knowledge Sharing 26
   3.2.2 Conflict 29

3.3 Instruments 29
   3.3.1 Knowledge Sharing 29
   3.3.2 Conflict 30

3.4 Group Composition 30

3.5 Analyzing the Data 33
   3.5.1 Analyzing Lost At Sea Outcomes 33
   3.5.2 Analyzing the Results of Conflict Questionnaire 35

4. DATA ANALYSIS
4.1 Introduction 36
4.2 Background and Composition of Participants 36
4.3 Knowledge Sharing 39
  4.3.1 Introduction 39
  4.3.2 Knowledge Sharing, Individual-Level 40
  4.3.3 Knowledge Sharing, Group-Level 42
4.4 Conflict 45
  4.4.1 Descriptive Statistics and Reliability Test 45
  4.4.2 Conflict, Individual-Level 47
  4.4.3 Conflict, Group-Level 49
4.5 Summary 51

5. CONCLUSION AND RECOMMENDATIONS

5.1 Findings 52
5.2 Contribution to Practice 54
5.3 Limitations and Generalizability 55
5.4 Future Research 56

REFERENCES 57

APPENDICES

Appendix A 68
Appendix B 77
## LISTS OF TABLES

<table>
<thead>
<tr>
<th>TABLE NO.</th>
<th>TITLE</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1</td>
<td>Composition of groups</td>
<td>32</td>
</tr>
<tr>
<td>4.1</td>
<td>Composition of participants</td>
<td>38</td>
</tr>
<tr>
<td>4.2</td>
<td>Pearson correlation for individual-level KS</td>
<td>41</td>
</tr>
<tr>
<td>4.3</td>
<td>Independent sample-T test for individual-level KS</td>
<td>42</td>
</tr>
<tr>
<td>4.4</td>
<td>Data normality test for group-level KS</td>
<td>43</td>
</tr>
<tr>
<td>4.5</td>
<td>Pearson correlation for group-level KS</td>
<td>43</td>
</tr>
<tr>
<td>4.6</td>
<td>Independent sample-T test for group-level KS</td>
<td>44</td>
</tr>
<tr>
<td>4.7</td>
<td>Pearson correlation for range reductions</td>
<td>45</td>
</tr>
<tr>
<td>4.8</td>
<td>Reliability test of conflict questionnaire</td>
<td>46</td>
</tr>
<tr>
<td>4.9</td>
<td>Descriptive statistics of conflict questionnaire</td>
<td>47</td>
</tr>
<tr>
<td>4.10</td>
<td>Pearson correlation for individual-level conflict</td>
<td>48</td>
</tr>
<tr>
<td>4.11</td>
<td>Independent samples-T test for individual-level conflict</td>
<td>48</td>
</tr>
<tr>
<td>4.12</td>
<td>Data normality test for group-level conflict</td>
<td>49</td>
</tr>
<tr>
<td>4.13</td>
<td>Pearson correlation for group-level conflict</td>
<td>49</td>
</tr>
<tr>
<td>4.14</td>
<td>Independent sample-T test for group-level conflict</td>
<td>50</td>
</tr>
<tr>
<td>5.1</td>
<td>Summary of results related to research hypotheses</td>
<td>54</td>
</tr>
</tbody>
</table>
## LIST OF FIGURES

<table>
<thead>
<tr>
<th>FIGURE NO.</th>
<th>TITLE</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1</td>
<td>International Knowledge Transfer Model</td>
<td>22</td>
</tr>
</tbody>
</table>
# LIST OF SYMBOLS/ABBREVIATIONS

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>Chinese</td>
</tr>
<tr>
<td>CoP</td>
<td>Community of Practice</td>
</tr>
<tr>
<td>F2F</td>
<td>Face-to-Face</td>
</tr>
<tr>
<td>I</td>
<td>Indian</td>
</tr>
<tr>
<td>KM</td>
<td>Knowledge Management</td>
</tr>
<tr>
<td>KS</td>
<td>Knowledge Sharing</td>
</tr>
<tr>
<td>M</td>
<td>Malay</td>
</tr>
<tr>
<td>NASA</td>
<td>National Aeronautics and Space Administration</td>
</tr>
<tr>
<td>UTM</td>
<td>Universiti Teknologi Malaysia</td>
</tr>
</tbody>
</table>
# LIST OF APPENDICES

<table>
<thead>
<tr>
<th>APPENDIX</th>
<th>TITLE</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Demography questionnaire and Group task</td>
<td>68</td>
</tr>
<tr>
<td>B</td>
<td>Conflict Questionnaire</td>
<td>77</td>
</tr>
</tbody>
</table>
CHAPTER 1

INTRODUCTION

*Culture is more often a source of conflict than of synergy. Cultural differences are a nuisance at best and often a disaster.*

1.1 Background of the Research

In today’s business environment, one can see changes everywhere, much faster than a couple of decades ago. As competitive advantages keep on diminishing (Stapleton, 2003), trade patterns do not follow the old norms (e.g. one can see technological products being exported from South Korea and China to the US; or India becoming the largest software provider in the world). No longer are the capital, labor, or land the determining factors in the new economy but rather intellectual capital (or knowledge) (Baker, 2008). More and more companies fall off while some others climb the ladder to the top ranks in world business. A simple look at the composition of Fortune 500 companies today and comparing it with sixteen-years-ago standing, as proposed by Housel and Bell (2001), would prove this statement.

Which companies would be the climbing ones in this so called knowledge economy? Most probably the answer is the ones that can create, gain, share, renew, and leverage knowledge into their operations to get a competitive edge, or the last competitive advantage as Stapleton (2003) argues. This fact is indeed realized by both the academia and practitioners, as a surge in literature on knowledge

---

1 Professor Emeritus Dr. Geert Hofstede, Maastricht University.
management, which is hereafter referred to as KM in this text, and also numerous consulting companies offering KM implementation services suggest (Chauvel and Despres, 2002).

Therefore, in today’s business environment it is of the most crucial steps companies need to take in order not to only prosper, but even to survive, to have successful KM policies and practices. This importance has been expressed by Drucker (1993) when talking about a knowledge society and referring to knowledge as the only real resource at present rather than another resource together with traditional production factors as land, labor, and capital. Nonaka and Takeuchi (1995) reinforce this concept nicely by saying that “knowledge has become the resource rather than a resource” (p.6).

To have a successful KM practice in an organization, knowledge sharing, or KS, must be facilitated. In fact, some researchers believe that KM is merely the management of KS, or managing the process of organizational learning (Huysman and De Witt, 2002). Although the role of technical solutions and infrastructure in facilitating KS is not disputed, it has a limited role in supporting KS. An example is provided by McDermott and O’Dell (2001) as the opening case in their article where a large global firm set up a website for the employees in different locations to share knowledge. The website offered interesting and easy to use interface and applications but the result was not as anticipated. After rolling out the project, they found most of the document areas empty, except for the initial entries. This case shows a situation where technology was provided, but the people who were supposed to use it did not do so.

To KS, social networks are often more important than the electronic ones (Huysman and De Witt, 2002). Obviously, even with a well-equipped, leading-edge IT supported facilities, there would be little gain, if any, as no knowledge would be shared if knowledge workers are not willing to use them. After all, it is the people who share knowledge not machines. The present literature implies that KM is not primarily about systems, but rather people who generate, share and receive knowledge. So, the present environment can be called a knowledge society and in
such a kind of society, social bonds and communication between human beings are stressed as work traits (Botkin, 1999; Cohen and Prusak 2000; Hansen, Nohira and Tierney, 1999).

When people interact and communicate with each other, they receive the cues and information they get and incorporate the new knowledge with their own contextual knowledge. Additionally, face-to-face (F2F) interactions are resplendent with nonverbal information and cues (Knapp and Hall, 2010). This process goes through a channel that is not as straightforward as it might be in the case of a control box in Mechanical or Electronic Engineering problems. Corporations are made up of people, and people always carry their ideas, prejudices and character traits with them all their life. These in aggregate form the culture of the community and the organization in which they live and work.

Individuals naturally tend to reinforce their identity by forming groups of people with which they share one or more traits. Once these groups are formed inside the larger groups or in the community, the concept of “in-groups” and “out-groups” emerge (Turner et al., 1987; Byrne, 1971). The way most people are socialized in their families, schools, communities, and other circles that influence cultural values of individuals; causes them to implicitly or explicitly feel some degree of unease facing people who are different from them (Fernandez and Barr, 1993). This difference is of significance to the current study as it can be a potential barrier to KS (Riege, 2005), because it can hinder smooth communication, thus affect information flow negatively.

Some of the most prevalent differences distinguishable among human beings are race, ethnicity and language. These are some of the first factors people may utilize in order to associate or differentiate themselves with someone else in a group (Turner et al., 1987).
1.2 Concept of Diversity

Work group diversity can be categorized into two types: Surface-level diversity and deep-level diversity (Carte and Chidambaram, 2004). Surface-level diversity can be defined as the noticeable differences such as gender, ethnicity, race, and age. For the purpose of this research, mother tongue would be considered as a surface-level difference as although it cannot be observed in facial composition of an individual, it would be apparent in the first contacts and it does not require time to appear. Deep-level diversity is the differences in characteristics that are difficult to observe such as personal values, skills and mental capabilities (Staples and Zhao, 2006).

Some studies on the effect of diversity on the group performance suggest that while surface-level diversity can have a negative effect on the process of forming a group identity at the first stages of life of a group, by time passage these effects would shrink. Then, it is the deep-level diversity that affects the group outcome in a positive manner and lead to a wider variety of ideas and creativity. This fact implies that the current research questions are more meaningful in short-term and especially in groups with a typically short life time such as project groups (Koskinen, Pekka and Hannu, 2003; Alony, Whymark and Jones, 2007). These effects will be reduced as time goes on if the group stays alive for an adequate time.

The diversity advantages stem from access to more diverse information sources (Wittenbaum and Stasser, 1996) and more creativity and innovation (Jehn, Northcraft and Neale, 1999; Lau and Murninghan, 1998). Negative effect can be decreased group cohesion (Harrison, Pierce and Bell, 1998), communication hindrances, interpersonal conflict and process losses (Watson, Kumar and Michaeelsen, 1993; Hambrick et al., 1998; Lau and Murninghan, 1998; Williams and O’Reilly, 1998).

It can be accepted logically that diverse groups have better access to different sources of information, hence can put forth more ideas and solutions. But the
inclination of group members towards their own subgroups; that is, the people inside the group with similarities to associate, proposes potential difficulties in capability to leverage this advantage. After all, those information and viewpoints must first be talked over and exchanged (McLeod, Lobel and Cox, 1996) to be effective. Considering surface-level diversity causing aforementioned process losses and biases towards in-groups and out-groups, getting to this level and leveraging the potentially positive effects of diversity can be difficult to realize and need a cumbersome process (Ancona and Caldwell, 1992; Carte and Chidambaram, 2004). Based on these, the researcher believes there are more disadvantages than advantages in workforce diversity to KS. But with the ever-growing pace of globalization, diversity is a fact not to fight with or ignore, but to appreciate and manage in a proper manner in order to maintain competitive advantage in a global marketplace (Fernandez and Barr, 1993).

1.3 Statement of Problem

As a rule, people tend to communicate more freely with the ones alike them. Whether in a classroom, neighborhood, or a work group, this tendency can lead to communication difficulties. In best case, where people want to be culture savvy, they may feel like walking on eggs not to offend others, as Fernandez and Barr (1993) put it, if they have not had enough exposure to each others’ culture. This in turn can result in communication exist in surface, which obviously cannot carry the meanings and material needed to be transferred and shared in KS. This way, organizations with the workforce composed of diverse ethnic groups can find themselves in a disadvantage in a knowledge economy. This led the researcher to study the relationship between diversity and KS in groups.
1.4 **Statement of Purpose**

The purpose of this study is to investigate the effects of ethnical and lingual diversities on KS effectiveness in heterogeneous groups compared to homogeneous groups. As diversity is usually associated with greater intra-group conflict in groups, the level of intra-group conflict will also be compared in homogeneous vs. heterogeneous groups looking for meaningful differences to see whether it also happen in the context of this research.

1.5 **Research Questions**

To address the aforementioned objectives and research problem, two research questions were identified and formulated as follows:

1- Is there a relationship between diversity and KS effectiveness in groups?

2- Is there a relationship between diversity and level of conflict in groups?

1.6 **Research Objectives**

This research has the following objectives:

1- To examine the effect of workforce ethno/lingo diversity on KS in groups;

2- To examine the effect of workforce ethno/lingo diversity on level of conflict in groups.
1.7 Scope of the Study

In almost every country in the world, there is a degree of ethnical diversity in the population. It has been basically high in countries such as India, low in Germany, and changed to high levels as a result of immigration in the US, Canada, or Australia. But in each of these examples, one would see some important points in common between the ethnic groups or the population has been, to a certain extent, blended into a somewhat smooth mixture. As in the US, one would primarily think of American culture rather than Hispanic/Latino, British, Chinese, Indian, or Italian culture. Research has shown that if the members of a group are diverse in several areas that go along each other and form a greater diversity area, then bigger faultlines can appear and result in further division and conflict problems (Lau and Murninghan 1998).

In this regard, Malaysia is almost unique. According to the information by The Ministry of Tourism of Malaysia (2009), the majority of its population is comprised of Malays. Specific racial compositions in Malaysia are Malays (50%), Chinese (25%), Indians (10%) and others (including Indigenous peoples) (15%). Here, the researcher only intends to include Malays, Chinese and Indians. These groups have lived in Malaysia for generations and are considered Malaysian (not immigrants or foreigners). Although these groups have influenced each others’ cultures to some extent over the years, there is still little overlapping between them in terms of appearance, religion, and cultures and one can distinguish them almost at the first sight. To the researcher, it means that the surface-level diversity factors are quite salient.

To get a better view of the ethnical and demographic composition of Malaysia, it is notable that Malays are primarily Muslim, are of Malay ethnicity, and speak Bahasa Melayu as their first language. Chinese in Malaysia come from Chinese ethnicity, most are Buddhist/Taoist, and mainly have Hokkien, Cantonese, and Mandarin and other Chinese languages as their mother tongues, though most learn Mandarin at school. Most Malaysian Indians are ethnically Tamil, speak Tamil language, and mainly practice Hinduism.
These three differences together make this diversity much more obvious and according to Lau and Murninghan (1998) can worsen the negative effects of the diversity. Having students studying at different schools, where they are taught in their own language, the so called vernacular schools, reinforces these effects during the early socialization process among young children. This way, studying diversity in a Malaysian context would be an advantage to this study, as the effects would probably appear in their extreme form which would make them easier to analyze. The prime minister of Malaysia, Mr. Najib Razak’s policy of 1 Malaysia also shows there is recognition for this issue in Malaysia and the effort to enhance the sense of unity in Malaysia. But it is worth mentioning that this issue (or problem, if can be termed this way) is not limited to Malaysia, as the US is facing the same problems to a different extent with Hispanic and Chinese communities within the country (Mor Barak and Levin, 2002; Wilson, 2003).

Although there were three major areas of difference in the Malaysian community just mentioned, in this study, the religion factor would not be considered in this research. In this study, groups will be formed by their differences in terms of ethnicity and mother tongue. The combination of these two factors would be viewed as one. The results do not seem to change much as there looks to be a one to one relationship between these groups and the factors. In other words, Malay race is associated with Bahasa Melayu while Bahasa Melayu refers to Malays and so on.

This study was conducted on local student (Malays, Chinese, Indians), from Universiti Teknologi Malaysia in Malaysia. While it is arguable that university students differ from industry workers in many aspects, this research views them as the future industry workers whose behaviors will affect the competitiveness of the firms they enter later.
1.8 **Significance of the Study**

With a careful look at the KM literature, it is apparent that whereas organizational knowledge has received a significant attention (Alavi, Leidner, and Kayworth, 2006; Balthazard and Cooke, 2004; Palanisamy, 2007; Zheng *et al*., 2009; Nayir and Uzuncarsili, 2008), the role of national culture has been less valued in KM literature (Walczak, 2008; Riege, 2005). On the other hand, while there is some work done on diversity and its effect on group performance (Pitts, 2005; Carte and Chidambaran, 2004; Staples and Zhao, 2006; Knippenberg, Dreu and Homan, 2004), there is very little work done on linking diversity with KM. Although firms can adapt certain policies and implement systems as to facilitate KS by building a cooperative organizational culture that values and encourages KS, it cannot totally offset the effects of cultural differences caused by ethnical diversity. This work would be done in order to shed some light on this issue and provide a base for future research and probable solutions.
REFERENCES


Saidwhat?: Funny Quotes, Author Quotes and quotes from famous Celebrities:

Nelson Mandella Quotes. Retrieved February 20, 2010, from:
http://www.saidwhat.co.uk/quotes/political/nelson_mandela/if_you_talk_to_a
_man_9870.

top management teams. The pivotal effects role of intragroup trust. *Journal

CA.: Sage Publications Inc.

Stapleton, J. J. (2003). *Executive’s Guide to Knowledge Management, the Last


micro level HR implications of network analysis. International Journal of
Manpower. 17(4&5): 168-96.

psychology*. Cambridge, UK: Cambridge University Press.

Thomas, K. (1976). *Conflict management in organisations*, In Dunnette, M.D. and
Bass, B.M. (Eds), Handbook of Organisational Behaviour, Sage, New York,
NY.

theory and research on minority career experience*. In Arthur, M.B., Hall,
Cambridge: Cambridge University Press.


