

Impacts of Cultural Differences on Knowledge Management Practices in Construction

Serkan Kivrak

*Department of Civil Engineering, Anadolu University, Eskisehir, Turkey
serkankivrak@anadolu.edu.tr*

Andrew Ross

*School of the Built Environment, Liverpool John Moores University, Liverpool, UK
A.D.Ross@ljmu.ac.uk*

Gokhan Arslan

*Department of Civil Engineering, Anadolu University, Eskisehir, Turkey
gokhana@anadolu.edu.tr*

Abstract

Knowledge management in the construction industry is essential for improving the business performance. Effective knowledge management can reduce project time and cost, improve quality and provide a major source of competitive advantage for the construction organizations. On the other hand, knowledge management practices can be affected by cultural differences since culture has the potential to impact on business activities. This paper presents a part of the research that was conducted among eleven UK senior managers who have some years' of experience in international projects and are involved in UK construction business. In this study, one of the specific objectives was to find out the opinions of managers about the possible effects of cultural differences on management practices in construction. Within this context, semi-structured interviews are carried out among these managers. The interviews took place over a 3-month period between November 2007 and January 2008, and each lasted approximately 1 hour. Analysis of the qualitative data has been carried out using NVivo 2.0 software. The analysis of the interviews showed that cultural differences have an impact on knowledge management practices in construction but in different ways and levels.

Keywords

Cultural differences, Culture in construction, Knowledge management

1. Introduction

Knowledge is one of the most important resources for an organization (Nonaka and Takeuchi, 1995). The success of an organization in today's competitive business environment is strongly related with its knowledge concerning the macro-environmental factors, competitive forces and technological advances. Thus, managing knowledge effectively is critical to the survival and advance of a company especially in project-based industries such as construction (Kamara *et al.*, 2002). In today's knowledge-based economy, effective knowledge management can reduce project time and cost, improve quality and provide a major source of competitive advantage for the construction organizations (Shelbourn *et al.*, 2006; Kivrak *et al.*, 2008a).

For Davenport and Prusak (1998), knowledge management is the process of creating value from an organization's intangible assets. Knowledge management deals with creating, securing, capturing, coordinating, combining, retrieving and distributing knowledge (Tserng and Lin, 2005). Although knowledge management is not a new concept, it is still an emerging topic in the construction industry.

Since culture has the potential to impact on business activities of companies, knowledge management practices can also be affected by cultural differences. Culture and cultural differences are important issues for every organization in every industry. The importance of culture and cultural differences has become more critical especially for companies operating in international markets or having employees from different cultures. As Ankrah and Proverbs (2004) stated, these concepts become more critical in construction due to the nature of contracting, internationalisation of procurement, joint venturing, and partnering in this industry. Like in other industries, the increase in strategic alliances in construction also increases the significance of cultural differences due to the interaction of people from different cultures (Shore and Cross, 2005). Therefore, companies have to consider the cultural concepts in their daily businesses to operate successfully in the global marketplace.

There are many different definitions of culture. The definitions differ greatly according to the research fields. Hofstede's (1984) definition in terms of organizations is "the collective programming of the mind which distinguishes one group from another". Barthorpe *et al.* (2000) presented an overview of the literature published on the subject of culture and defined it simply as "what we are and what we do as a society". A research carried out by Abeysekera (2002) showed that culture in the construction industry is considered to be about the "characteristics of the industry, approaches to construction, competence of craftsmen and people who work in the industry, and the goals, values and strategies of the organisations they work in". Holden (2002) defined culture as varieties of common knowledge. He suggested that cross-cultural management can be viewed as a form of knowledge management, and culture as an organizational knowledge resource which can be managed.

In researching national cultures, Hofstede (1984) identified four dimensions of culture. These extensively used and well known dimensions are; power distance, uncertainty avoidance, individualism/collectivism and masculinity/femininity. Another study of how cultures differ has been developed by Trompenaars (1993) who identified seven dimensions of culture which are universalism-particularism, collectivism-individualism, neutral-emotional, diffuse-specific, achievement-aspiration, attitudes to time, and attitudes to the environment.

The advantages of managing cultural differences successfully have been addressed by many researchers (Fatehi, 1996). It can enhance organizational effectiveness and give an organization a strong competitive advantage. On the other hand, failure to manage cultural differences can cause serious problems such as delay of construction and decrease in productivity.

There is a growing interest in the studies on the culture of the construction industry, projects, and the effects of culture and cultural differences on construction. Hall (1999) investigated the links between cultural diversity and international construction activity from a British perspective. He found that British construction companies adopted an ethnocentric response to the cultural differences that they encountered when working overseas. Mahalingam *et al.* (2005) investigated which institutional or cultural differences had the most significant impacts on global projects. Liu and Fellows (1999) investigated the impact of culture on construction project goals.

Previous studies and experiences in the construction industry showed that cultural differences have an impact on daily businesses, either negative or positive, of construction enterprises working nationally or internationally. However, exactly how culture affects management is still a difficult question to answer (Shore and Cross 2005).

2. Impacts of Culture on Knowledge Management

There have been different findings on the influences of culture on knowledge management. Some studies showed no evidence that cultural differences have an impact on knowledge management practices (Jensen and Szulanski, 2004; Gupta and Govindarajan, 2000). Simonin (1999) also found no evidence that cultural distance had any effect on ambiguity in knowledge transfer.

On the other hand, there have been several studies that showed an impact on knowledge management practices (Voel and Han 2005; Ford and Chan, 2003). Finestone and Snyman (2005) found that cultural diversity in companies result in barriers in knowledge sharing. Similarly, Sackmann and Friesl (2007) assessed the cultural influences on knowledge sharing behaviour in project teams. They determined that different cultural backgrounds of team members due to different ethnicities, gender, national culture or functions create a context of cultural complexity, which might affect knowledge sharing in a negative way. Thiessen *et al.* (2007) found that cultural differences increase the difficulties of transferring explicit knowledge whereas the increase is smaller for those associated with the tacit knowledge transfer.

Ma *et al.* (2008) also examined the impact of some key contextual factors that affect knowledge sharing within project teams in the Chinese construction sector. They found that trust is positively related to knowledge sharing. In their study, Dhanaraj *et al.*, (2004) also found that tie strength, trust and shared values are important in tacit knowledge transfer in international joint-ventures. Some other studies also showed that knowledge sharing, communication, and learning in organizations are strongly influenced by cultural values of individual employees (Hutchings and Michailova, 2004; Ardichvili *et al.*, 2006).

In his study, King (2008) focused on the various levels of culture in terms of how they can affect knowledge management practices and outcomes. He developed a conceptual framework that can be used by a firm to address culture-knowledge management relationship issues. Ang and Massingham (2007) examined the affect of national culture on knowledge management for multinational companies and proposed a framework for standardization and adaptation of knowledge management processes based on differences in national culture. They found that the level and nature of impact will vary by knowledge management's processes or sub-processes. Bhagat *et al.* (2002) provided a conceptual framework of international transfer of organizational knowledge. Pauleen *et al.* (2007) developed a model to explain the influence of national culture on organizational knowledge management processes. Their model proposes that national culture affects organizational knowledge management processes both directly and indirectly.

This paper presents a part of the research that was conducted among eleven UK senior managers. One of the specific objectives of this study was to find out the opinions of managers about the possible effects of cultural differences on management practices in construction business. In this paper, the possible effects of cultural differences on knowledge management practices in construction have been examined. The general findings of the research have also been illustrated in the following section.

3. Research Methodology

In this study, semi-structured interviews are carried out among 11 senior managers, including directors, project managers, group managers, HR managers and construction managers, who have some years' of experience in international construction projects and are involved in UK construction business. In order to provide enhanced understanding and generate rich descriptions of the concept of cultural differences in construction, a qualitative methodology has been utilized. The majority of the participants have more than 20 years of experience in the construction industry. It is assumed that these participants have enough knowledge about the organizational structure, culture and strategies. Similarly, the companies they work for have more than 20 years of experience in international construction projects. The interviews took place over a 3-month period between November 2007 and January 2008, and each lasted approximately 1

hour. In interviews, the participants were asked a number of open-ended questions and they were strongly shaped by the probing questions to seek further details.

The interviews with these participants were audio-recorded and transcribed. The data collected were coded and analyzed using the qualitative analysis methods proposed by Strauss and Corbin (1998), including coding of individual interview data and coding of the overall data set. Then, the NVivo 2.0 software was used in the analysis of the qualitative data. Finally, emerged themes from the data were identified which will be discussed in the following section.

4. Study Findings

The general findings of this study have been presented elsewhere (Kivrak *et al.*, 2008b). In summary, all interviewees acknowledged the importance of cultural issues in performing business activities in the construction business environment. According to the participants cultural differences can have an effect on all management practices, but in different ways and levels. However, some management practices were more highlighted in the interviews. These are human resources management, knowledge management, communication management, safety management, time management, and negotiation. In this paper, a more detailed discussion of the impacts of cultural differences on knowledge management is presented.

Table 1 illustrates a summary of the NVivo analysis results including the number of interviewees who mentioned each issue. The concepts that were coded in the NVivo analysis and the emergent categories are also illustrated in Figure 1. During the interviews, the managers gave different comments on the influences of culture on knowledge management. One manager had no specific idea about knowledge management and the impact of culture. This may be attributed to the lack of knowledge management practices in that company. Another participant saw no direct connection with culture and knowledge management: *“I think it’s probably an expectation here to adapt to the construction industry. I don’t think that our company necessarily adjusts, changing its management practices to accommodate somebody else’s culture. There are practices which can not be changed because we have to make quality standards. They wouldn’t change that.”* (Interviewee G).

The ultimate goal of knowledge management is the sharing of knowledge (Tserng and Lin, 2005). The majority of the managers also highlighted the importance of knowledge sharing and pointed out the direct relationship between knowledge sharing and culture. As one manager commented: *“The knowledge, the culture, goes back to my original point about learning. More cultures you come across, I think the more acceptable we become. In other words, more adaptable and more broader you become as a person. From my experience, the knowledge management, knowledge sharing and knowledge capture are best placed being in that persons culture, team that he is faced with. And you can respect that, capture that”* (Interviewee J).

As mentioned previously, cultural differences can provide several advantages for organizations. Knowledge sharing and learning were also considered as the most important advantages working with different cultures. One interviewee illustrated this by saying: *“They bring something different to share knowledge and experience, and they bring the best skills together. But the difference is the culture. So you have to understand and respect. The advantages could be the disadvantages and likewise. You got to understand whom you working with”* (Interviewee E). Implementing a knowledge management strategy and establishing a knowledge management team are essential in a company for effective knowledge sharing especially when working with different cultures. Another manager highlighted this point by saying: *“We are going to employ a knowledge manager. One of her areas would be to look at the cultural ways of working in our offices. See what advantages they bring. We recognize that the knowledge*

capture, knowledge management is now a major issue. So if you are working with different cultures, we need to respect, then there would be very good practices” (Interviewee J).

Table 1: Summary of NVivo Analysis

| | Theme | Number of interviewees who mentioned the issue |
|----------------------|-----------------------------|--|
| Cultural Differences | <i>Knowledge management</i> | |
| | Knowledge transfer | 6 |
| | Knowledge sharing | 9 |
| | Innovation | 4 |
| | Trust | 3 |
| | Language | 8 |
| | Knowledge capture | 5 |
| | Learning | 8 |
| | Knowledge loss | 2 |
| | New business methods | 3 |
| | Knowledge management team | 1 |
| | Experienced staff | 3 |
| | Training | 2 |
| | Project databank | 2 |
| | Experiences | 2 |
| Language | 2 | |

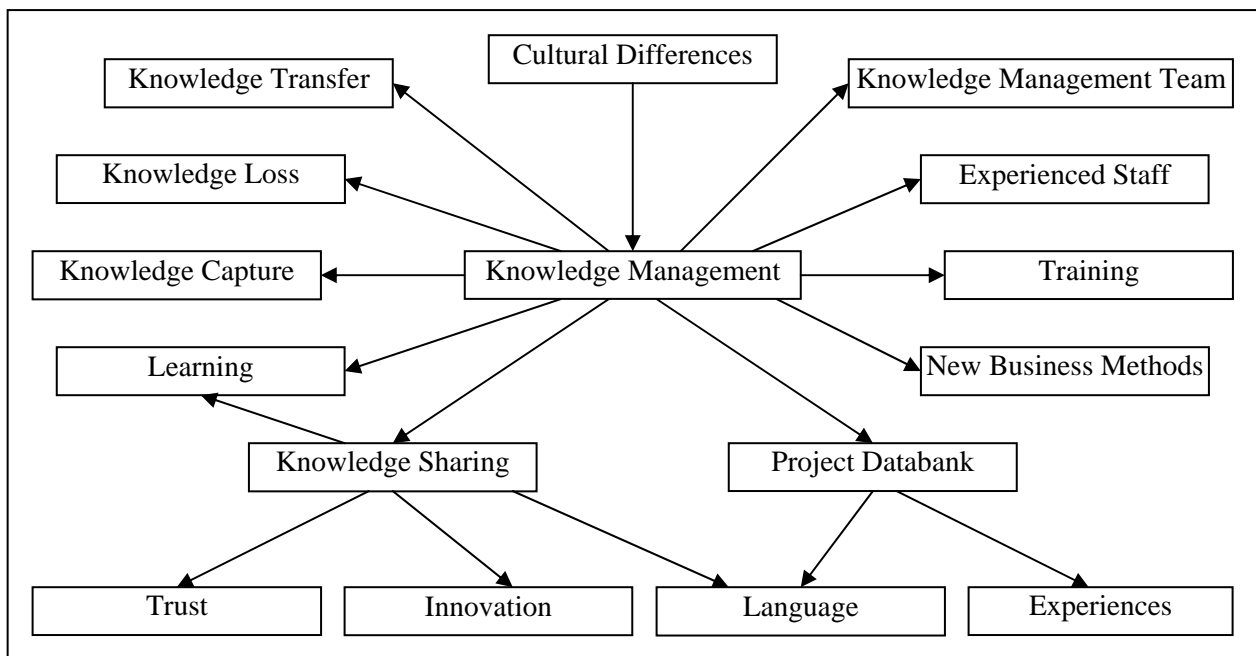


Figure 1: Cultural Differences and Knowledge Management

Communication is a key element of knowledge sharing and effective communication is highly essential in knowledge sharing processes. The majority of the participants identified communication barriers as the major problem in the knowledge sharing process between cultures. They focused on the problems caused by language differences. One of the managers stated that: “We are working in different areas with different cultures. We are going into areas where people that first language is not necessarily English. I

have been in a situation recently and we had to go through the language line. You know we had to talk and the first time I did not really exactly understand what they wanted to. I said yes yes! It can be very difficult”(Interviewee H). Another manager also pointed out the problems due to language differences: *“Language is a clear cultural difference, however patience can be most important in this regard. The influence often depends on the personal beliefs of those involved as to whether it is positive or negative”*(Interviewee K). This finding correlates well with the previous studies regarding the impact of culture on knowledge management. For instance, the study of Ford and Chan (2003) showed that different languages create an important barrier since knowledge got lost in translation.

Another significant issue in knowledge sharing between cultures was found as trust. Trust is a key factor in effective knowledge sharing between project team members having different cultural backgrounds. It is widely accepted that without a trusting environment, people may be less willing to share their knowledge with others (Ma *et al.*, 2008; Sackmann and Friesl, 2007). Trust is especially important in sharing tacit knowledge which is recognized as the most valuable knowledge in an organization. Therefore, organizations have to create a trusting environment in which the knowledge sharing process can effectively be performed. One participant noted: *“They bring something different. Sharing knowledge, experience and they bring the best skills together. But the difference is the culture and people are different. So the advantages could be the disadvantages. You got to understand whom you working with”* (Interviewee E).

Knowledge management is related with innovation. In this study, innovation was highlighted as the significant advantage resulting from effective knowledge sharing. It has also widely been recognized that culturally diverse team members can be more innovative and innovation is a key term in knowledge management practices. The possibility of more innovation in culturally diverse teams was a common idea by all of the managers. Similarly, coming up with alternative solutions to problems was pointed out as a vital benefit: *“I think they can open your mind and you can come out with different things. It gives value for the project and more flexibility, and this is a continuous thing. Things like the integration of language line”* (Interviewee H). Another manager commented: *“It really depends on how opened and how wealthy that the country is. For example India is totally different. Everybody has a computer, everybody has a mobile phone and they all want to learn about things and technology because the country is on the way isn't it? So innovation is very easy to take them to the next step isn't that? So we have to adapt to all those different cultures on the ground regard to innovation as well as the cultural difficulties that each country has”* (Interviewee A).

Technology plays an important role in facilitating knowledge management processes in a multi-cultural environment. Although technology itself can not solve the problems related to knowledge sharing in organizations, it may significantly improve knowledge management processes. One manager pointed out the importance of a web-based system in which knowledge can be stored. On the other hand, he also highlighted the importance of the language used in these systems: *“We have a system. All information is stored in a central system. If you have completed the project you got some lessons learned and best practices you can share. And those are very open formats. So you can write it in any language you want. But clearly I prefer English in the UK”* (Interviewee C).

5. Conclusions

Culture has the potential to impact on business activities. Therefore, companies have to consider the cultural issues in their daily businesses to operate successfully in the global marketplace. This study is based on interviews with managers from the UK construction industry. In this paper, the impacts of cultural differences on knowledge management have been examined. The analysis of the interviews showed that cultural differences have an impact on knowledge management practices in construction but in different ways and levels.

Based on the results, cultural differences can have an effect on all management practices. The highlighted practices that can be significantly influenced by cultural differences were human resources management, knowledge management, communication management, safety management, time management, and negotiation. The majority of the respondents highlighted the direct relationship between cultural differences and knowledge management practices. Cultural differences can have significant impacts on knowledge sharing. On the positive side, working with different cultures can improve innovation and problem-solving. On the negative side, language differences and miscommunication were considered as important problems in the process of knowledge sharing. Moreover, trust is considered as a key factor in knowledge sharing between cultures.

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