Chapter 13

Knowledge Sharing for Improving Effectiveness of University–Industry Collaborations

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ABSTRACT

Knowledge is one of the most important strategic resources in industrial organizations. Knowledge sharing is a mechanism to capture, disseminate, transfer, and apply useful knowledge. For these reasons, knowledge sharing has become a strategic issue as a source of funding for university research and as a policy tool for economic development for industrial organizations. Collaborations between universities and industrial organizations can play an important role in the areas of knowledge sharing. There are many factors that can affect collaboration between industrial firms and universities. This chapter begins with the description of the term knowledge. It discusses knowledge sharing and collaborations between universities and industrial organizations and the importance of communicational channels, especially information and communication technologies and university libraries. Finally, this chapter proposes a conceptual model for knowledge sharing collaborations between universities and industrial organizations.

INTRODUCTION

With the advent of information and communication technologies (ICTs) and the information revolution, there are changes in the way information and knowledge are being processed, managed, and used. Most attention and interest are focused on the knowledge and knowledge sharing that would serve customers, clienteles, and patrons. These changes are transforming the way industrial organizations behave, demanding new efficiencies in innovation and creativity (Abdul Rahman, 2011).

In the modern knowledge economy, knowledge is becoming increasingly important to economic growth (Coriat & Weinstein, 2001). Economic growth can exist in the knowledge-based society if the production of knowledge increases. The modern knowledge economy is about the production, sharing, and utilization of knowledge. Knowledge and intellectual property determine competitiveness, which play a key role in fostering a culture that promotes information and knowledge sharing in industrial organizations (Cong & Pandya, 2003).

Similarly, universities are places for knowledge, science, and research. In order to play an important role in the knowledge economy, it is important that universities transfer knowledge to societies and industrial organizations. In this context, communicational channels play vital roles in knowledge sharing between universities and industrial organizations. There are both formal and informal channels, including information communication technologies (ICTs) and university libraries (Khosrowjerdi, 2011; McInerney, 2002). In order to clarify the processes involved, this chapter begins by defining the term knowledge, then discusses knowledge sharing and collaborations between universities and industrial organizations and the importance of communicational channels, especially information and communication technologies and university libraries. Finally, this chapter proposes a conceptual model for knowledge sharing collaborations between universities and industrial organizations.

WHAT IS KNOWLEDGE?

Explaining the term "knowledge" in brief is not easy. In the literature of knowledge management, the difference between data, information, and knowledge is important. Although these three terms are usually used interchangeably, the term "data" can be regarded as raw facts, while "information" is the raw data, which can be categorized, structured, and organized. And the term "knowledge" denotes the information, which has been usefully interpreted so as to increase its meaning and significance (Grover & Davenport, 2001). When data, information, and knowledge are ranked for value, knowledge is highest because it is most directly related to decision-making and operations. According to Drucker (1999), knowledge is personal and intangible in nature, whereas information is tangible and available to anyone who cares to seek it out. Davenport and Prusak (1998) define knowledge as a fluid mix of framed experience, values, contextual information, and expert insight that provides a framework for evaluating and incorporating new experiences and information. They further mention that in organizations, knowledge often becomes embedded not only in documents or repositories, but also in organizational routines, processes, practices, and norms. Recently, prominent authors have defined knowledge as a meaningful resource that makes a new society unique. Drucker (1993) argued that knowledge has been the basis of capitalist society, which is highly specialized. Toffler (1990) saw knowledge as the essence of power in information age.

Knowledge is usually divided into two categories: tacit and explicit (Allameh et al., 2012; Nonaka, 1991; Nonaka & Takeuchi, 1995). Explicit knowledge is described as documented or codified knowledge while tacit knowledge is non-documented or non-codified one. According to Polanyi (1966), tacit knowledge is personal, context-specific, and therefore hard to formalize and communicate. Explicit knowledge, on the other hand, refers to the knowledge that is transmittable in formal and systematic language. Nonaka (1991) states that explicit knowledge is formal and systematic and that can be easily communicated and shared. On the contrary, tacit knowledge is highly personal, hard to formalize, and therefore difficult, if not impossible, to communicate.

The acquisition of both tacit and explicit knowledge through university-industry alliances has been reported by Sherwood and Covin (2008).

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