Conceptual Model for Specialized Learning Systems within Organizations

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ABSTRACT

This study is focused on the potentiality and benefits that intelligent learning systems can bring to knowledge intensive organizations, in particularly software houses. Therefore the authors will present a conceptual model for the foundation of specialized knowledge systems with dynamic content regulation, oriented to self-learning. Its structure is based on the combination of semantic technologies (e.g. ontologies) and social networks, from where interaction lasts. To achieve that goal, it is important to know-how to explore the information in this type of environments, as well as understand which behaviors and trends influence the individuals learning in the digital era. The connectivist theory offers an important contribution to the understanding of this phenomenon, being therefore one of the basic reference in the development of this work.

Keywords: Collaborative Learning, e-Learning on Workplace, Intelligent Learning Systems, Learning Networks and Connectivism, Semantic Technologies, Specialized Knowledge Systems

INTRODUCTION

In a very competitive and globalized society organizations face new challenges and demands to improve their efficiency levels. Facing scenarios of fast evolution, organizations constantly have the need to produce changes and adjustments able to assure competitive advantages in order to survive in these markets. This way, it is more important than ever to adopt mechanisms and working tools that provide them the velocity and flexibility required, for decision making, re(definition) of business strategies, in terms of innovation, access to information and knowledge management. Only by following this path will organizations be able to respond to the new requirements and all the complexity inherent to these changes.

Technology assumes a critical role in this dynamic arena. Organizations are becoming
increasingly more dependent on it to manage their businesses (e.g., means of production, generated information, human resources and training). Nowadays, technology is seen as one of the pillars to face the challenges brought about by the digital era, mainly in regard to the acquisition of skills and renewal of knowledge. Technology is omnipresent in almost all sectors of life, namely, in social and professional life of the modern society. As far as information technologies are concerned, they are a segment of reference, in the framework of development of this study.

Its importance is highlighted in the domain of information, communication and inevitably education and training management. Moreover, Social Web also represents an icon of change. It opens a wider range of new communication channels, which gives people “the habit of being able to talk to the world and create an impact” with that (Curtichs, Antunes, & Toca, 2011, p. 14).

It is common sense that we are undergoing a period of strong innovation and accelerated renovation (Santos, 2004). This, in turn, triggers organizations and their members to rethink their learning tools, in order to be ready to follow the rhythm of such changes.

In the field of organizational science, this vision associated with lifelong learning and to the valuation of experience, as an objective to renew and innovate, is found in the scope of learning organizations. Its principles are based upon a systemic logics, where the individual and the organization as a whole, work interactively for the success of the business (Senge, 1993). In turn, the modern theories of economic growth point out the human development as a striking factor for the progress of societies (UNDP, 2010). Taking into account this perspective, knowledge and learning are viewed as essential requirements to ensure sustainability and differentiation of companies, in liberalized and highly competitive economies.

The alignment of these factors with the interest of organizations has as assumption the coordination between the organizational strategy and the professional performance. Its purpose is to create a cycle of influence around the individual and people in his network, so as to increase levels of performance and fulfillment of professional objectives. The knowledge produced this way, shared and distributed through the network of peers, will motivate the creation of new spheres of value within organizations. From a strategic point of view, this may turn into efficiency and quality gains, with better results for the organization as a whole.

Having these standards as a basis and bearing in mind the importance foreseen by the use of technologies, supporting specialized training in the context of work, this study turns up as a reply to a still unexplored phenomenon – learning at the workplace, supported by intelligent learning systems. This way, a structure to support intraorganizational training is being developed. Its usage is aimed at software houses. Based on semantic technologies and technologies of social interaction, it integrates a control module, whose objective is to validate and classify the liability of the contents generated among the community of users.

Therefore, considering the characteristics of this kind of business, where learning should be a continuous process and access to knowledge has to be fast and updated, being frequently of shared origin, it is expected that its usage provides an answer to a market segment with high requirements in this domain.

Thus, in a broader perspective, the aim of this study is to help organizations going through changes, regarding the enhancement
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