Chapter 4

A Knowledge Management Tool for the Interconnection of Communities of Practice

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ABSTRACT

In their daily practice, practitioners belong to local communities of practice (CoPs) within their organisation. This knowledge is rarely capitalised upon because discussions are mainly verbal. Practitioners can also belong to general CoPs online. Within these general CoPs, discussions are rarely linked to the context in which they appeared, since the members are from different companies or institutions. This paper (1) connects these two levels of CoPs by contacting practitioners belonging to CoPs centred on the same general activity but who are geographically distributed and (2) capitalises on the produced knowledge by contextualising, allowing it to be accessible and reusable by all the members. The authors detail the main results of the research: (1) a model of the interconnection of CoPs (ICP) to support knowledge sharing and dissemination; and (2) a specific knowledge management tool for the ICP knowledge base. The authors apply the model and platform to university tutors by: (1) developing a use case, which links the model and the TE-Cap 2 platform and highlights the new possibilities offered by the knowledge management tool; and (2) conducting a descriptive investigation lasting for five months.

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1. INTRODUCTION

The research work presented in this paper is conducted using a global iterative research approach that aims at developing an innovative assistance environment for educational tutors in universities. Tutors generally belong to communities of practice (CoPs) within their company or institution. At this local level, members of CoPs engage in many face-to-face discussions, often very contextual, in order to solve problems. These discussions are only mediated by computer to a minor extent and the knowledge generated is not or is very little capitalised upon.

Web technologies have also allowed the emergence of general online CoPs gathering together tutors practising the same activity but belonging to different organisations. At this more general level, CoPs are supported by tools (e.g. forums, blogs, and wikis) but the discussions are relatively unstructured and are uncontextualised. The knowledge generated in these forums is then difficult to reuse, no context having been assigned to it.

In this context, we aim at (1) connecting these two levels of CoP by contacting tutors belonging to CoPs centred on the same general activity but who are geographically distributed and (2) capitalising on all the produced knowledge by contextualising it, so as to make it accessible to and reusable by all the members in their working contexts. We also aim at fostering the dissemination of knowledge from one CoP to another, to lead to the possible creation of new knowledge.

The research question relates to university tutors but the results can also be applied to many other activities. In this paper, we detail two main results of our research: (1) a model of the interconnection of CoPs to support knowledge sharing and dissemination for CoPs interested in the same general activity (see section 3); and (2) a specific management tool for the knowledge generated by interconnected CoPs (see section 4). This innovative tool offers three main functionalities: a customisable interface that offers users fast access to the relevant resources according to their working context; a structured and evolutionary method of knowledge classification; and a process for the dissemination of knowledge between different CoPs. We applied the model and platform to the case of tutors by: (1) developing a use case, which links the model and the TE-Cap 2 platform and highlights the new possibilities offered by the knowledge management tool (see section 5); and (2) conducting a descriptive investigation lasting for about five months (see section 6).

2. RESEARCH APPROACH AND BASIS

2.1 A Co-Adaptive Approach

The research work presented in this paper is conducted using a global research approach. This approach aims at developing an innovative assistance environment for educational tutors in universities (Lavoué, George & Prévôt, in press). We are interested in tutoring as a general activity to improve tutors’ efficiency and the way they work. We adopted a co-adaptive approach so as to develop a platform that satisfies tutors’ needs in terms of help or assistance, independently of the institution to which they belong. Since tasks assigned to tutors vary according to institution, our objective is not to develop an environment that would optimise particular tasks, to which recognisable needs correspond. Our objective, rather, is to understand tutors’ activities in qualitative and quantitative terms in order to generate new ideas of conception and to innovate. The final aim of our system is to support an emerging helping process between tutors that cannot be well defined a priori. That is why our experimental approach consists of making the users become aware of their needs in order to provoke reactions and making them express these implicit needs. This approach also allows us to interpret users’ implicit needs in regard to existing theories.