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.

Keywords: Collaborative Support Systems, Information Search and Retrieval, Interconnection of Communities of Practice, Interorganisational Systems, Knowledge Sharing, Online Tutoring, User-Centered Design

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
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.

Our approach is based on an iterative process. According to Mackay and Fayard (1997), for triangulation across disciplines, each cycle is composed of three steps: theory, design of artefacts, and observation. Indeed, when the activities are poorly identified, the literature is a resource rich in propositions for new prototypes. That is why our approach uses evolutionary prototyping (Floyd, 1993; Muller, 2003) based on techniques drawn from a variety of research and from several disciplines. This approach allows us on the one hand to understand the users’ activities and to anticipate the use of the system, and on the other hand, to develop prototypes with regard to the observed use. The specifications of users’ needs and expectations are at the centre of the design process because it is necessary to ‘create’, to define, and to refine them, in order to develop the technology based on this evolution. The iterative process aims at clarifying users’ needs by experimenting on the ground using a prototype based on the needs as they emerge. The process is composed of three development cycles: (1) identification of...
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