Learning Organizational Memory

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Education and training are strongly concerned by Information Technology progress. Information Technology has already transformed the way we work and has a growing impact on the way we learn. New approaches mainly based on the utilisation of web technologies have been proposed. These approaches are often grouped under the concept of "e-learning", which is still unclear but often put forward as a key-solution to professional training difficulties. Indeed, e-learning allows on-site training and can contribute to a closer integration between working and learning situations. However it raises also many problems and its progression is slower than one could at first think.

A key point in building an e-learning solution is to give the users an easy access to the resources they can use. To this end, knowledge is often cut up into learning objects, meeting so knowledge management techniques. More generally our goal in the MEMORAe project is to study the possibility to apply knowledge management techniques to the construction of e-learning solutions.

E-learning brings some new characteristics regarding to classical training situations. First of all, using the term e-learning rather than e-teaching sets the focus on the learner. In e-learning situations, the learner has to be more active than in classical training applications. Knowledge is not presented linearly as in a course. It is divided into learning objects and the user has to choose the learning objects he considers as being useful for him. He can be helped in this task by a tutor. Teachers and learners roles are deeply modified: learners have to be more active and can cooperate with other learners, teachers play the role of tutor and often contribute to the construction of the resources.

In an e-learning application we find therefore people (learners, teachers, administrators, etc.) who need to communicate and access knowledge and information when they need it ("just in time"). This kind of situation has some similarities with a knowledge management situation. Knowledge management aims at formalising knowledge in order to share it and to reuse it. To that end, a solution often met is to build an organizational memory and to use ontologies to manage it [Benyamins *et al.,* 1998].

In the MEMORAe project we have chosen to build a learning organizational memory and use it as e-learning. In such a project, the building of an ontology is useful to structure the memory content and to define a shared vocabulary. It allows to represent learning objects as notions to be apprehended and also as index to reach any knowledge or documents that concern them. Thus, documents themselves are not necessarily cut up into learning objects. Learning objects are not the result of a delimitation of text but concepts that index documents. The context of their presentation is preserved. A learning organizational memory also includes comments and information about documents and about actors (learners, tutors, teachers, administrators, authors etc.) so as to facilitate communications. Finally, using ontologies allows to add a context to users requests and facilitates the access to the information thanks to the semantics associated to the concepts.

Our learning organizational memory is implemented by way of a knowledge base to represent any knowledge about the learning organization and a database to stock electronical documents. This memory will be available to users on the web.

References

[Benyamins *et al*., 1998] Benjamins R., Fensel D, Gomez Pérez A. (1998), "Knowledge Management through Ontologies. " In Proceedings of the 2nd International Conference on Practical Aspects of Knowledge Management (PAKM98), Basel, Switzerland.