Communities of Practice as a Paradigm

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Abstract — In the last decades radical changes have occurred in advanced societies, essentially due to three factors: the diffusion of information technologies, the acceleration of scientific and technological renewal, and globalization. The advanced society model today is characterized by rapid and forced innovation of products to put on the market and by a process where market and innovation feed each other. Information and knowledge are the resources to improve in order to keep the level of skills required for professionalization which cannot be acquired a-priori and in a single solution. So, people very often learn from practical experience, by facing new situations that require effective solutions and give them a chance to acquire new knowledge. In pedagogy this phenomenon is defined as informal learning based on tacit knowledge. Therefore, the professional person, does not need static knowledge any more; on the contrary, he/she requires new tools “for learning to learn”, in order to increase his/her expertise quickly. In this paper we want to propose the community of practice as a flexible and dynamic methodological tool (paradigm) for defining a professional figure. Our intent is to use the community of practice to create a model of a specific professional figure. Such a model, which traditionally includes the conceptual, logic-functional and physical phases, is not pre-defined, but built by analysing the interactions that occur in the community of practice. Thus, it is modifiable on the basis of the new demands identified in the practice of the profession itself. In order to verify our proposal we assumed the creation of a community of practice among the Didactic Managers of our university, a figure required by the Italian University Reform. The expertise necessary for this profile is not well-defined yet, and only through practice it is possible to clarify tasks and aims. Therefore, it seems an excellent environment in which to experiment our paradigm.

Index Terms — Communities of Practice; Dynamic Paradigm; Professional Profile.

I. INTRODUCTION

Traditionally, in order to plan a system or solve a problem we may utilize the “Design” paradigm, rooted in Engineering. [1]. Such a paradigm consists of four steps: state requirements; state specifications; system design and implementation; system test. These steps may be repeated several times, especially if the reveals a mismatching between results and requirements.

Obviously such a paradigm works both for material and immaterial things. In particular, these four steps are more significant if redefined as follows:

- State requirements and state specifications = Conceptual Model
- System Design = Logical Model
- System Implementation = Physical Model

- System Test

In the case of immaterial objects, as for example the definition of a professional figure, the physical model can match its execution. The test phase which is generally required, allows the verification of whether what implemented satisfies the requirements and the specifications. This means what established in the conceptual model, but always inside a pre-defined rigid scheme which does not go beyond the starting requirements and specifications.

On the other hand, our aim, is to identify a paradigm which not only verifies the correspondence of the realization to the conceptual model, but also, dynamically enriches it with new specifications and requirements. This is because the professional figure, as we have already pointed out, evolves and changes continuously in the practice.

We have fallen in with a suggestion coming from a paper published in the nineties and entitled ”A Different Learning Approach: the Hypertextual Paradigm” [2]. The paper highlights that the hypertext may represent a new training model because the web of evocative links on which it is founded, may be transferred into the educational domain.

The hypertext, in fact, is an associative non-linear document, based on participative interactions and therefore comparable to the human mind, which does not work in sequences, but makes free associations and evocations. Knowledge is a process of active exploration and building of semantic areas, and the hypertext can represent the model for a new, more dynamic and interactive way of learning. The web of evocative links may be constantly updated and is able to modify the learning process in a dynamic way. Analogously, we consider a strategic tool, for defining a professional figure: the use of a paradigm whose principal characteristic is dynamicity.

Taking into account the community of practice of professionals, whose profile we wish to outline so as to update it, we will verify how the practice may enrich knowledge, expertise and skills. In this way, the continuous updating and training in the job field becomes easier. We think that the community of practice can represent our new paradigm.

II. THE COMMUNITY OF PRACTICE PARADIGM

Figure 1 graphically shows the logical concept of the community of practice as a paradigm.

In comparison with other forms of aggregation, as for example groups of work, groups of interest, communities of the best practices [3], the model of the community of practice turns out to be especially suitable for our purpose for two reasons: First because such communities foster processes of organizational learning; secondly they allow
the emergence of so-called tacit knowledge, its formalization and capitalization.

Moreover, Wenger’s concept of community of practice is based on the social theory of learning. According to this theory, learning consists in directly participating in the practice of a specific social community, and building a specific identity with reference to the community itself. In this perspective, through participation, the “doing” and the “being” of the community, its practice and identity are defined. In fact, Wenger defines the community of practice as a group of people with a common interest or passion for something, who, on the basis of this interest, interact regularly to improve their way of acting.

So, starting from a reciprocal engagement between members who have a work relationships, the aim of building a collective concern is pursued. Therefore, there is a practice sharing, carried out through continuous interactions. The exchange produces a shared repertoire of artifacts, tools, routines, histories, languages, actions, beliefs and values which represent the capitalized knowledge of the community.

Such a repertoire is not provided by external subjects, on the contrary, it is the product of a process inside the community, animated by individuals who are pairs and free from any hierarchy. This allows the community of practice to be a paradigm. Indeed, only people personally involved in specific professional activities, possess, or acquire in itinere, the expertise necessary to define their professional profile, and progressively fit it to the changes in their work context.

We think that by using tools as a data mining technique, it is possible to extract from the amount of data which are present in this virtual “tank”, the knowledge of the professional figure we intend to form and to define his/her characteristics. Then, a model of the profile may be defined which will be reintegrated into the practice of the community so as to be reviewed, updated or improved. In this dynamic process the continuous evolution of the professional figure is collected, processed and modified according to the changes of the practice.

However, the lack of precise references does not prevent its activation. Indeed, the structural elements pointed out by Wenger as fundamental and indispensable, remain: the thematic field – that is, the object which the community focuses on - the community itself - which initially may be identified by the membership feeling -, and the practice, - that is the specific knowledge that the community develops, shares and updates during its existence -.

To ensure the development of the community, we have created carrying on an environment where all the Didactic Managers have the possibility of interacting, comparing themselves with each other, and sharing the practice. This environment is provided with suitable tools for synchronous and asynchronous communication, both for exchanging experiences and requiring support and help. This is done with technologies for the development of collaborative activities principally based on problem solving concepts, and a repository for collecting, retrieving, and storing data which represent the so-called “tank” of common knowledge.

Moreover, the environment is furnished with suitable tools based on data mining techniques and methodologies for the extraction of the characteristics and specifications which not only allow the precise outlining of the Didactic Manager profile, but also leave it open to evolution during the practice.

IV. CONCLUSIONS

This paper intends to highlight the importance of defining a model for building professional figures, who are continuously required to modify and adapt themselves to the stimuli coming from the job market competition. Communities of practice, because of their specific characteristics, may represent this flexible paradigm which assures continuous and permanent training.

Our intent is to implement and fulfill the experimentation phase among our Didactic Managers in order to validate the proposed method and extend it to every field where specific, updating expertise and skills are required.

REFERENCES


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