

# Virtual communities of Learning: A proposal for the Medium Teaching

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## Abstract

The development of the Web produced countless proposal of virtual organizations, such as the Virtual Communities which constitute one in the most natural and efficient ways of integrating the communication and distribution of the resources among people with ideas, interests and common objectives. Such communities are ruled by the same principles that rule the development of real communities (RealCommunities, 2000). In this article it is described a study of the major concepts and ideas used in the virtual communities' construction, especially focalizing the learning communities. It's also introduced a general vision of a prototype, that this being developed in order to construct a system for a virtual community of learning bound for the Medium Teaching.

**Key-words:** Virtual communities<sup>1</sup>, Learning<sup>2</sup>, Medium Teaching<sup>3</sup>.

## 1 – Introduction

The school formation nowadays it is becoming more and more difficult due to the educational deficiencies and demands of the job market. According to Rasmussen and Elizabeth Kinner [Ras97], the teaching is suffering a great pressure to show that it is preparing students for the diversified world of work and for the challenges presented by the community in turbulent times. Nowadays the teaching communities suffer some kind of pressure in order to guarantee a more flexible curriculum, forcing them to get advantage of innovations in instructive techniques and of the technology itself. Finally, there is a desire to emphasize higher levels of critical thought along the educational system.

As part of this recent interest in looking for innovative and flexible approaches for teaching instruction, Virtual Communities of Learning (VCL) they are getting the attention of teaching entities in varied disciplines. Virtual Communities of Learning are an approach of curricular way that coordinate two or more courses in an only instruction program, that is frequently called of a learning community.

The virtual communities of learning appeared as a promise of innovation for the teaching entities and their

instructors. Going against the tradition of isolated courses and proposing better approaches, more interdisciplinaries, we can obtain the flexibility to adapt our institutions and to satisfy the future of our communities in this new century.

## 2 – Virtual Communities

The study of virtual communities is relatively a recent theme of the computing research (Kollock, 1997; Maglio & Barrett, 1998), which developed from previous researches in the area of the cooperation (Axelrod, 1984) and of the initial perception that user groups with interests and similar characteristics could benefit of a base of common resources. In the current stage of the technological development of the Internet and of the World Wide Web, the study and implementation of virtual communities appear to be very opportune, since these allow and stimulate the sharing of and the cooperative work among their members, offering a new dimension to the human activities of learning and practices.

Virtual community is a group of individuals (the members of the community or users) who share knowledge, interests and objectives in a specific domain through the Internet. Virtual communities examples are the constituted by the members of any organizations in spaces online, corporate intranets, cooperative action environments, online educational systems etc.

A possible approach to the virtual communities study is the social selection (Mothers, 1994; Resnick & Varian, 1997), where the interests are indirectly determined by the users distribution according to groups of common interests. The point in the social selection is, therefore, to join together the users correctly. In general, the one's interests determine communities, but in this approach the users usually don't interact directly to judge the adaptation of a certain content.

Another alternative is the social navigation, where the individual users transmit explicit information to each other, in an interactive process (Dieberger, 1997; Gruen & Moody, 1998). In the social navigation there is not a mechanism for the automatic delivery of the information, what is made directly from a member of the community to another. The main problem here is to promote the users' disposition for the sharing the information.

In the communities of the web, the focus is usually in the tools, such as, chat, discussion forum and email. It is important not to confuse these tools with the community itself. Online communities are more than merely a collection of tools. They are organizations similar in everything to the associations of the real world; just existing and developing in a digital way.

### 2.1- Social Principles for Virtual Communities

In (RealCommunities, 2000) twelve principles are formulated, considered by the authors basics in the creation and development of virtual communities. The first six principles are related with the necessities and individual expectations of the users, while the others are related to the organization and structure that must exist to viability and success of the group. The set of principles mentioned, establishes coherently the main relationships and actions that support the evolution of the virtual communities. The principles are presented and briefly commented in Table 1.

**Table 1: Twelve Principles for Virtual Communities**

Principles	Commentary
01 Intention	It has an objective or common interest.
02 Identity	Everyone knows who are each one
03 Communication	It has easy ways to share information and ideas.
04 Confidence	The confidence between the users and the community is produced naturally at time goes by.
05 Reputation	The members of the community get status in the group on the basis in the

	personal achievements.
06 Sub-groups	It is possible to establish relationships in small groups.
07 Environment	The users interact in a adequate shared space to their needs and objectives.
08 Limits	It is know who belongs to the community and who does not
09 Government	The behavior is regulated according to common principles assumed by all.
10 Interchange	Exchanging to the knowledge are facilitated
11 Expression	Everyone can easily express its preferences and opinions to the group.
12 History	It is possible to review the history and to trace the evolution of the community.

**According to the twelve principles of the virtual communities :**

As intention all the Virtual Community must have the same objective. So that all may search for the same purpose, this must be the main focus of the virtual community.

In the identity, the members of the VC must duly be identified, which means: all must be able to know themselves inside of the VC. Through its acts, manifestations and assumed positions the members of the community acquire a reputation among the others. The reputation is essential to establish reliable relationships and also complements the principle of the Identity.

In the VC, the government is really, a form of a self government. It is important that each member of the community feels responsible for its development. This administration form is more efficient and likeable than any other one.

The communication must always be inside of the community, showing that all can give its opinions and help to construct the knowledge, sharing ideas and displaying its way of satisfaction or dissatisfaction in the community.

The VC can be divided in some sub-groups, that possess some common interest, so that it can establish relationships between the members of the group in order to, later, join the general community.

The environment must be pleasant to the users and must congregate the preferences and objectives of its users in a same space, where all can share ideas, opinions, suggestions and contents, so that the learning may be mutual.

It is necessary to impose limits to the VC, in order to know, all the time, who belongs to the community and who does not. It means, having the control of the system. With passing of the time, the members of the community pass to know and to trust each other. This principle is much connected to the principle of the Identity.

The exchange of information must always occur, facilitating the interaction between the users and increasing of the knowledge, to the point where software and other resources are available, so that all the community has access to them. Even in the case of the information not to be of common interest of the users, the people who want to express their preferences and opinions, must always have a place for this of free access to the group, or either, all must be able to express themselves freely.

History is related mainly to the documentation of the community, it must be allowed that people who leave or start to be part of the community, can know how it is organized, who is part of it, who has already been made, and how everything works. At any moment, it must be able to see how the community is evolving and what has changed

**3 - Virtual communities of Learning**

As it has already been commented in item 2 the proposal of the virtual communities of learning is to offer contents (texts, articles, books online, tutorial, etc.), resources (online research, news, software, videos, multimedia presentations, etc.) and potential of communication (email, cooperatively, chat, online-conference, etc.) to take care of the common intention of its members: the area of knowledge, not limited to a single discipline or subject. The VCs of knowledge specific learning must be learned by all the participants of the same ones. The environment must, therefore, concentrate and to provide resources that contribute for this learning, prioritizing the communication between its members. This environment, in order to concretely reflect the commitment with the common objective, must be constructed, through the action of its users and, in the case of adaptative communities, its presented in a personalized way for each one of these users. The challenge to construct VCs of learning is thus

bigger than developing a course or disciplines isolated for online distribution. It is presented here an approach simultaneously Inter and transdisciplinary, where the user gains bigger flexibility in the elaboration of its proper knowledge. The community, for its own nature, in general possesses the necessity to exchange information and communication between its components. In the virtual communities of learning the potential of collective intelligence of the group is stimulated by the diverse forms of communication offered and exercised by the continued action of its components. One notices, however that the virtual community does not substitute the Real or part of it. Virtual and Real is joined in the evolution of the community and, the incorporation of the virtual one does not occupy the space of the Real, but extends it. The evolution of the virtual space must, therefore to project itself in the Real and vice-versa, improving processes of learning, communication, quality of the research and contributing for the evolution of the community as a whole and at the same time individually. For the creation and development VC of learning, diverse tools and technologies must be available, in order to guarantee the total exploration of the accumulated pedagogical potential in the net. Most of these technologies implements some form of communication, however tools for individual use are also necessary.

#### **4 – Proposal of an Prototype of a Virtual Community for Medium Teaching**

The proposal of the virtual communities of learning for medium teaching is to offer contents, resources and potential of communication to take care of common intention of its members: the learning of one determined area of knowledge of medium teaching, is not limited to a single discipline or subject. In the VCLs for medium teaching the focus must be dealt as an area of knowledge that must be learned by all the participants of them. The environment must promote resources that contribute for this learning, facilitating the virtual communication among its members to stimulate the cooperative action offering contents as texts, articles, books and resources as research online software video room and others without motivating any alteration of the content of the obligated discipline and the context of the community.

The environment, to concretely reflect the commitment with the common objective, must be constructed through the class action of the students and teachers, using the diverse forms of virtual communication as instrument to propagate this action. The metaphor of the virtual community induces the cooperative communication among its members and has the characteristic of complementing the processes of conventional education with the domain and use of technologies information and communication. The according to medium teaching must concentrate and provide disciplines the current lines of direction of this kind of education. It must be constructed and adapted as the characteristics of each school without modifying the original structure of work of this institution providing resources that contribute to the learning, enriching the form of education with resources offered for the virtual community.

#### **5- Interface of access to the Prototype**

The interface of the virtual community for medium teaching is constituted by the access of a main page to a database. The database possesses varies tables such as general user, teacher, students, grade, disciplines, activities, evaluation, exercises, control and others. Through the main page the access to the other pages is distributed. Each user has its profile adapted for its type of activity, as for example, the student has the corresponding access in accordance with the grade where he finds himself and in agreement he has his disciplines with their available tasks. The teacher also has its profile to provider material for activities, notes and others, and the administrator has its access in accordance with its activity, for example: sign in teacher, disciplines, grades, students and others. Together with the cited concrete data of the system it is also kept the care with the visual part of the system, as the combination of colors, that cannot be visual polluted to the user, harming its vision and the part of information as the user must execute tasks or access the definitive points must be detached.

Figure 1 below represents the main page of access of the user.



**Figure 1 - Page of access to the community**

### **5.1- Interface of User`s Register**

When the user has access to the main page for the first time, he finds an information that he must sign in. After his register each user will be able to usufruct his area in accordance with his profile. Figure 2 represents the environment of registers the sign in of the user.

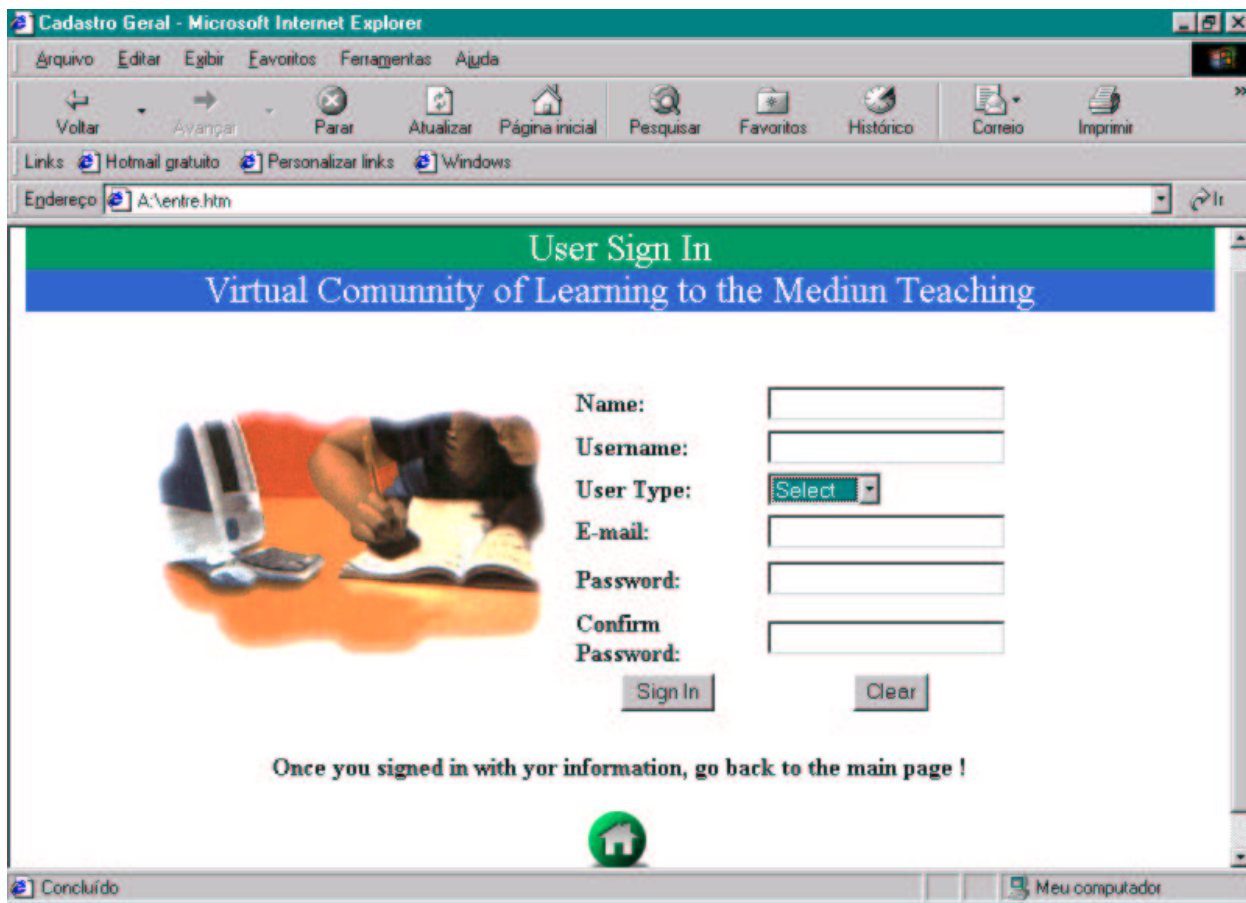


Figure 2 - Page for user's sign in

When the user effects its registers in cadastre it will have an identification as teacher or student. This identification is generated by the interaction between tables of the user of the virtual community and the table of the system of the school that possesses the registers, either of the student in the school or the teachers.

## 5.2- Connection to the System of the Community

The connection is after reached the identification of the user by its username/password. The page of the user is access at this moment, from the information present in the database liberating the access for the environment of the user in accordance with the its identification. When completing login correctly the page of the user is presented with the following sections: Identification of the User, environment of the user as: student, teacher or administrator, information service, communication services, learning resources as chat, video room, virtual library, pages of disciplines and tasks available, local research and in the Web, personal agenda for students or teacher, news and etc.

The most important characteristic of the system are that each user of the community possesses its proper environment in accordance with its profile without violate environments of different users.

## 6 – Conclusion

During the study and development of this work the concept of Virtual Communities was taken into consideration, satisfying the main objective of this work that is to follow the model of a virtual community of learning and specifically apply it in the development of a Virtual Community of Learning guided for medium teaching, where the discipline of the medium teaching will have their contents elaborated for the teachers, and each student possesses a profile or model of contents and resources will in accordance with its necessities that will be available on the basis of the model of each student. The interface of each student and teacher is adapted to take care of its objectives, necessities and preferences for development of the learning process. The concern in the development of Virtual Communities for medium Teaching is to create methodologies and techniques to take care of the same ones without having alteration in the profile and structure of each school, and it must provide resources that contribute to the learning, enriching the form of education with resources offered for the virtual community. Therefore following the rules of the methodology and techniques one concludes that the prototype developed for the community of medium teaching could be adapted for any school of medium teaching in Brazil.

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