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# Online learning: virtual communities in blogs

Aprendizagem em/na rede: comunidades virtuais de aprendizagem em blogs

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### **Abstract**

Blogs are media intended for computer mediated communication, which enable interaction, collaboration and online socialization. They are characterized as virtual spaces that enable the creation of virtual communities. In the educational context, blogs are an important resource for collective writing and collaborative learning, which enable communication and group work, while fostering an authorship process over the Internet. Current studies point out that online learning happens in virtual learning communities. Through this perspective, this study focuses on research about the creation of virtual learning communities in blogs. The study involved the analysis of interaction through the exchange of comments and links posted on a blog. The results show the specificities of virtual learning communities and the potential of the Blog as a tool for collaborative learning over the Internet.

Keywords: Virtual communities. Virtual learning communities. Blog.

#### Resumo

Os bloas consistem em suportes para a comunicação mediada por computador, permitindo a interação, a colaboração e a socialização online. Assim, caracterizam-se como espaços virtuais que possibilitam a constituição de comunidades virtuais. No contexto educacional, os blogs constituem importante recurso para escrita coletiva e aprendizagem colaborativa, oportunizando a comunicação e o trabalho em grupo, promovendo o processo de autoria na Internet. Estudos atuais apontam que a aprendizagem online acontece por meio das comunidades virtuais de aprendizagem. A partir dessa perspectiva, este estudo busca investigar a formação de comunidades virtuais de aprendizagem em blogs. O estudo foi realizado a partir da análise da interação por meio das trocas de comentários e links, postados em um blog. Os resultados apontam as especificidades de uma comunidade virtual de aprendizagem e o potencial da ferramenta blog para a aprendizagem colaborativa na Internet.

Palavras-chave: Comunidade virtual. Comunidade virtual de aprendizagem. Blog.

### Introduction

Blogs are tools for maintaining and publishing websites. They consist of messages (also referred to as postings or posts), comments, illustrations, image, sound and video files, organized in a reverse, but temporal manner, in which the most recent posts appear at the top of the page. The first blogs, known as weblogs (web+log = web file) appeared in 1997 and their popularity has been increasing ever since. Studies on Blogs have been intensifying over the years and, according to Amaral, Recuero e Montardo (2009), it is remarkable that a tool that has been on the web for over ten years is still current in people's daily lives. The authors (2009, p. 23) also point out that the "versatility of being suitable for a wide variety of tasks" contributes to its survival on the web.1

<sup>&</sup>lt;sup>1</sup> Amaral, Recuero and Montardo (2009) present a history of the creation of weblogs.

According to Lemos (2008), the blogs have been turning into one of the most popular phenomena of cyberculture<sup>2</sup>. According to him (2008, p. 9), blogs

> are created for very diverse purposes, reflecting a desire that is repressed by the mass culture: that of being an author in the emission, producing content and sharing experiences. Blogs reflect the liberation from the pole of emission that is characteristic of cyberculture.

The characteristic of "liberation from the pole of emission" pointed out by Lemos (2008), added to the ease of use, classifies the blog as a social software, which can become a tool for subjects to come together in cultural output, thus enabling the construction of knowledge witnessed by various onlookers. According to Spyer (2007, p. 21), "the term 'social software' is used to refer to the type of program that produces environments for socialization over the internet, which is behind online collaboration", such as blogs, micro-blogs, wikis, file sharing tools, and others.

Thus, a *blog* can be understood as a tool that seeks to generate opportunities for collaborative actions. The blog generates a commitment between its authors, its readers and its commenters, which leads to learning. Gutierrez (2003) underscores the possibilities of this tool in the educational arena, understanding that blogs become tools for reflection and comparison in the construction of knowledge. According to the author (2003, p. 95),

> this opportunity to reflect about thoughts and practices, to compare stages of processes, is paramount to teachers and students. Monitoring the work of students and colleagues makes one aware of their own practice. The dynamic content of a blog can keep a record of the construction of knowledge and its stages, as well as making room for investigation.

<sup>2</sup> Cyberculture is presented as a mark of contemporary culture, whose notion and practices converge to a more intense relationship between men and machines, suggesting new everyday habits and new forms of socialization through computer-mediated communication (LÉVY, 1999; LEMOS, 2008).

However, Gutierrez (2003, p. 95) underscores the importance of understanding that information and knowledge are different things, and that "the computer, the Internet and the possibilities of access to information offered by digital technologies are necessary, but not enough for the construction of knowledge".

Blogs were initially used as public online journals, but over time and with their popularization, they acquired other characteristics and roles. According to Recuero (2003), they can be used as electronic publications intended for information, commentary, chronicles, short stories, or as mixed publications, encompassing intimate journals and various items of information. Primo and Smaniotto (2006, p. 233) also makes use of the concepts presented by the author, especially when stating that "we must overcome the notion of the blog as an individual text and space, as a celebration of the ego in cyberspace".

From the foregoing, it is clear that blogs are no longer just personal publications, and have become boosters of collectively built actions among the subjects sharing this space. Accordingly, understanding blogs as communication tools and, consequently, social interaction tools, this paper seeks to reflect on the possibilities of setting up virtual learning communities in blogs.

This study starts with the creation of a collectively written blog between two fourth grade classes from two public schools in the city of Novo Hamburgo, in southern Brazil. Based on the initial reflections on the concepts of virtual community, we set out to study blogs as potential tools in the formation of virtual learning communities.

# Virtual communities and virtual learning communities

The term community refers to groups that feel bonded by some sort of sense of belonging, whether geographically, by territorial proximity or by the pursuit of common interests, in an extraterritorial perspective. Technological developments, especially the spreading of Internet access, has

allowed for new forms of communication between people, whether in close or distant locations, thus providing opportunities for the creation of a new community, without territorial basis. Thus, the late twentieth century and early twenty-first century have witnessed the consolidation of the concept of virtual communities (BAUMAN, 2003; CASTELLS, 2003).

For Rheingold (1996, p. 18), "virtual communities are social aggregations that emerge from the Net when enough people carry on those public discussions long enough, with sufficient human feeling, to form webs of personal relationships in cyberspace". Recuero (2008, p. 65) points out that

> the concept of virtual community is an attempt to explain the social groupings that arise in cyberspace. It is a way of trying to understand the change in sociability, characterized by the existence of a social group that interacts through computer-mediated communication.

Castells (2003) introduces the notion of virtual communities as new technological supports for sociability, unlike other forms of interaction, but not inferior to those. He also highlights that virtual communities operate based on two fundamental common characteristics:

- a) value of free, horizontal communication, characterized by online communication, from many to many;
- b) formation of autonomous networks, which involves the ability of any person to choose/define their web browsing flow, in addition to the potential to create and disseminate their own networks.

Recuero (2009) suggests that virtual communities on the Internet can be recognized based on three different types: membership communities, emerging communities or hybrid communities. An emerging community is characterized by a denser core, in which the actors are connected by stronger nodes<sup>3</sup>, and a periphery, where the weaker nodes are located. Thus, "the ties

<sup>3</sup> Each point in the network.

that connect actors in the emerging community are strong at the center and weak in the periphery". However, the dynamics of emerging communities stands out because the ties "can be strengthening and heading towards to the core or weakening and moving away from it" (RECUERO, 2009, p. 154). Membership (or affiliation) communities are characterized essentially by the "membership of actors through reactive social interaction (joining the group and being accepted by it), which does not require direct interaction between the actors, or even social interaction in the sense of a conversation" (RECUERO, 2009, p. 156). Hybrid communities have characteristics of both types (emerging and membership).

Virtual communities focusing on learning can be classified into virtual learning communities (VLC) or communities of practice (CP) (PALOFF; PRATT, 2002; DANIEL; SCHWIER; McCALLA, 2003). The main difference between a VLC and a CP lies on the nature of the participation of the subjects. While the VLC focuses on educational goals, the CP emphasizes the sharing of experiences and interests related to professional activities. While every virtual community is related to an element of learning, not every community can be called a VLC, as this implies that its members have explicit goals related to learning (DANIEL; SCHWIER; McCALLA, 2003).

Paloff and Pratt (2002) argue that the VLC is the space where online learning takes place. The authors point out some indicators that an online community is forming:

- a) active interaction, regarding course content and interpersonal communication, i.e., for a student to be considered "present" in class, it is not enough to access the class: he or she must participate by contributing with their thoughts/ideas;
- b) collaborative learning, perceived through the exchange of messages and/or comments among the students and between students and teacher:
- c) socially constructed meaning, evident from discussions involving agreements or inquiries, as the class/course progresses;

- d) sharing resources (books, articles found on the Internet, research sources) among students, allowing them expand their bibliography beyond the texts selected by the teacher;
- e) exchange of expressions of encouragement between students and willingness to critically assess the work of colleagues.

Schwier (2007) also points to categories to analyze the formation of VLCs. According to the author, VLCs can be understood from three levels. The first level is the center core (Catalysts of Virtual Learning Communities), which drives the formation and the continuity of the community. The central element of this core is the communication among participants of the community, along with the sense of presence/participation, interaction, engagement and alignment. The second category, which consists of an intermediate core (Emphases of Virtual Learning Communities), is the emphasis of the VLC, which can be classified into communities of relationship, place, ideas, reflection or ceremony. A third, external level (Elements of Virtual Learning Communities), is constituted from thirteen elements, emphasizing the idea that communities are complex. The elements are: historicity, identity, mutuality, plurality, autonomy, participation, confidence, path, technology, social protocols, reflection, intensity and learning. Thus, the studies by Schwier (2007) show that communities do not happen spontaneously, but they are also not created. These categories seek to guide educators in fostering the development of VLCs.

In this study, it is understood that the blog as a space created by relationships that take place between the interactors<sup>4</sup> can be regarded as a medium for the formation of these communities. Nevertheless, the fact that a blog receives many visitors does not grant the creation of a community. Thus, "in other words, one cannot think that a blog, because it has many daily visitors, is a community in itself" (PRIMO; SMANIOTTO, 2006, p. 237). In this case, in order to understand the formation of a virtual learning

Primo (2003) understands interaction as "action between" the participants of the encounter, who he defines as interactors.

community in a blog, one must analyze the quality of the relationship between interactors (RECUERO, 2009; PRIMO; SMANIOTTO, 2006).

According to Recuero (2009), interaction is a communication process, which is reflected between the subjects interacting and in the outcome of these communicative exchanges. Primo (2003, p. 63) characterizes two types of computer-mediated interaction: mutual interaction and reactive interaction, in which

> the mutual interaction is characterized by interdependent relations and negotiation processes, with each interactor engaging in the inventive and cooperative construction of the relationship, mutually affecting each other, whereas the reactive interaction is limited by deterministic relations of stimulus and response.

The mutual interaction cannot be predetermined, the relationship is only defined during the interaction itself. The reactive interaction is characterized by the fact that the exchanges take place within established limits, i.e., from the same inputs one gets the same outputs. Primo (2007) also considers that mutual interaction is also built from previous relationships, because an interactor contributes to the formation of another. Thus, mutual interaction is in line with the idea that communities are consolidated based on negotiations and based on the ties that are established.

Social ties are understood as the effective interaction among the participants of a relationship. The ties may be strong or weak. Strong ties are characterized by closeness, intimacy and intentionality in maintaining the connection with another. On the other hand, weak ties are characterized by sparse relations, which do not translate into intimacy and closeness. It is understood that the analysis of interactions in a virtual learning community based on the social ties implies realizing the importance of both strong ties and weak ties in the formation and survival of the community (BASSANI, 2011).

In a Blog, the ties can be perceived through the comments tool. Thus, comments generate the ties that eventually become the social capital produced by certain interacting individuals. Recuero (2009) highlights that the social capital on the Internet is a set of resources of a particular group, which can be enjoyed by all members of the group, and which is based on reciprocity.

From the theoretical elements presented, it is clear that virtual learning communities present specificities in relation to virtual communities, once they emphasize learning in formal educational spaces. Downes (2009) highlights that the learning activity in communities is, in essence, conversation between the participating subjects. For the author, conversation is not restricted to words, but also encompasses images, video, sound and others. However, this study focuses on written language, based on the messages posted on the blog and their comments, as described in the following section.

### The research route

As stated earlier, this qualitative study 5, started with the creation of a collectively written blog between two fourth grade classes from two public schools in the city of Novo Hamburgo, Brazil which will be herein referred to as School A and School B. Participating classes in Schools A and B comprise students aged between 8 and 14 years. Of these, 23 belong to school A and 28 belong to school B, adding up to a total of 51 students.

The topic of collective discussions was the phenomenon of tourism in the schools areas, emphasizing the cultural and natural aspects of these neighborhoods. The blog Novos Roteiros Turísticos em Novo Hamburgo (New Tourist Routes in Novo Hamburgo)<sup>6</sup> was used to create a space for exchanging tourist information between schools, in order to identify new sites that can be explored for tourism, and allowing students to see their neighborhood as a place that also offers attractions in the city, thus fostering the self-esteem of local residents.

<sup>&</sup>lt;sup>5</sup> This study is an excerpt of the Masters dissertation Development of local tourism through community participation: building a virtual community in a blog (cf. FRITZ, 2010).

<sup>&</sup>lt;sup>6</sup> The blog is available at <a href="http://www.turismonomeubairro.blogspot.com">http://www.turismonomeubairro.blogspot.com</a>>.

The study was conducted based on blog posts and comments. During the study, there were 44 posts, which resulted in 103 comments.

# Reflections on the formation of the virtual community

The research provided an opportunity for students to have a first contact with the Blog tool. It was observed that the appropriation of the technological tool is an important aspect in the formation of a virtual community. The blog is a hybrid community, combining characteristics of emerging communities, where interactions are based on social exchanges conducted by conversation, as seen in the messages, and membership community, since the tool enables a particular subject to "follow" the blog, without the need for effectively engaging in its authorship.

The appropriation of the tool was perceived from two aspects: creation of new networks and construction of identity within the community. Thus, the appropriation of the tool spurred the creation of new blogs, transcending boundaries and expanding the possibilities of communication, as pointed out by Castells (2003), and providing opportunities for interaction between the subjects from Schools A and B beyond the school environment. The construction of identity within the network was detected in the signatures on the posts and especially in the comments tool. In the original proposal, each school/class received a password and posts were recorded as School A and School B. However, as students discovered the potential of the Blog tool, the posts became personalized, presenting a record of authorship (the student's name and photo).

According to Schwier (2007), interaction within a community usually results in the engagement of ideas, people and processes. The interaction in the blog takes place in the comments related to a particular post. By observing the conversation between subjects, evidence of collaborative learning and sharing of knowledge can be clearly perceived, reflecting a process of mutual interaction. In this case, interaction is defined through the process of communication exchanges. As the subjects

make some information available on a social tool, the type of communicative situation that will be generated from this interaction cannot be predicted, as shown in the post below (Table 1).

Table 1 - Example of mutual interaction evidenced in a post in the blog

Can you explain to me what a maid is? Mauricio hi, i'd like to know more about the visit to the Hotel. I'd like to know more about the visit to the Hotel. I'd like to know more about the visit to the Hotel. I'd like to know more about the visit to the Hotel. I'd like to know more about the visit to the Hotel. I'd like to know more about the visit to the Hotel. I'd like to know more about the visit to the Hotel. I'd like to know more about the visit to the Hotel. I'd like to know more about the visit to the Hotel. I'd like to know more about the visit to the Hotel. I'd like to know more about the visit to the Hotel. I'd like to know more about the visit to the Hotel. I'd like to know more about the visit to the Hotel. I'd like to know more about the visit to the Hotel. I'd like to know more about the visit to the Hotel. I'd like to know more about the visit to the Hotel. I'd like to know more about the visit to the Hotel. I'd like to know more about the visit to the Hotel. I'd like to know hat is your teacher's name?  is the hotel cool?  hit, how was meeting the hotel manager? What is his name? Have you been to any hotels before? Suélen  hit juys, I'd like to know went to and we want to see the hotel too, I love it!!!  I'd like to know what the word hospitality means? By the way I loved the pool bye bye guys. JULIA M.  I'd like to know what a sauna is? Laura  hello I'm juliane I love the hotel It is really beautiful and I didn't know it existed. JULIANE  I'd like to see more pictures of the hotel. Ânderson  I really enjoyed reading about the hotel, it must be cool to go in the guest rooms and talk to the staff! Júlia .B.  hit guys, how much does it cost to stay in the hotel for one day? Fernanda K.  HELLO I AM DIONATA I REALLY ENJOYED THE PHOTOS.  Was the visit to the hotel cool? I'd like to go there  Fernanda G.  hello i'd like to know what does conference room mean? Thank you, leral zaname Martins Berté  Hit, we really like to hotel, it is very beautiful. So, is it a luxury hotel? GABRIELI CRISTINI DA SILV
you guys should come visit it too. Thiago and Augusto.

**Table 1** - Example of mutual interaction evidenced in a post in the blog

Post	Comments
	The Hotel is pretty cool. Thiago and Augusto.  • To answer your question: A sauna is a room where you relax and rest, with hot steam. Rafael and Nicolas.  • The Locanda hotel is very cool, we even had a burger. bye guys see you soon  • The manager's name is Ricardo. He's pretty cool!!

Fonte: Dados da pesquisa.7

According to Schwier (2007) the intensity of a virtual learning community is manifested in the engagement and participation in the discussion, which can be verified in the conversation excerpt presented above. Moreover, the sense of belonging and coexistence in social networks can build trust. Trust relationships are an important element in the survival of virtual learning communities, boosting the establishment of social ties and meaningful exchanges. The analysis of the connections established in Blog underscored the social ties between schools A and B, between students and between the individual blogs that were created after the appropriation of the tool. The figure below shows the social network that was established based on the blog interactions. As stated earlier, the first posts were linked to a unique password (Teachers 1, 2 and 3). It was observed that the appropriation of the tool allowed for the customization of the posts, as evidenced from the interactions among the students from schools A and B and the blog. The figure also allows for visualization of external relations with the community and with other blogs, which are evident in the comments.

The fact that the blog has asynchronous features, in which the subject do not need to be connected all the time in order to interact, fosters learning, thus enabling the reflection and subsequent intervention.

Available at: <a href="http://www.turismonomeubairro.blogspot.com.br/2009/05/visita-ao-hotel-">http://www.turismonomeubairro.blogspot.com.br/2009/05/visita-ao-hotel-</a> locanda-no-dia-280409.html#comment-form>. Access on: Sept. 26, 2013.

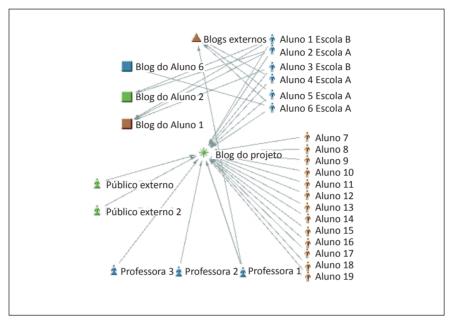


Figure 1 - Social network

Source: FRITZ, 2010.

Some posts remained on the blog for a long time without comments, but according to their interest, the subjects commented on the topics.

Thus, the another perceived aspect was the potential of the blog as a new space for teaching and learning. Current studies suggest that cyberspace supports intellectual technologies that amplify, exteriorize and modify numerous cognitive functions, such as memory, imagination, perception and reasoning (LEVY, 2001; ALAVA, 2002). These new "intellectual technologies" foster new ways of accessing information, through search engines or hyperdocument agents, and new styles of reasoning and knowledge, involving simulation/modeling of complex phenomena or artificial intelligence resources. Furthermore, through cyberspace, these technologies can be shared, leveraging what Levy (2000, p. 28) understands

as collective intelligence. For the author, collective intelligence is "a form of universally distributed intelligence, constantly enhanced, coordinated in real time, and resulting in the effective mobilization of skills".

According to his reflections on education in cyberspace, Alava (2002) believes that this cannot be reduced to a technological space that ensures a better passive transmission of knowledge, but rather that it must be understood as a social space for communication and group work. The author believes that knowledge is not a pre-constructed, mediatically distributed product, but, instead, the result of an individual or collective work of construction, based on information or situations that are mediatically designed to offer opportunities for mediation. Thus, Alava (2002) underscores that the emergence of new open education devices tends to bring up ideas of collaborative work, students' autonomy and active methods. Accordingly, "[...] the technology of the network determines a profound change in social relations, as well as in the organization of numerous human activities. Such developments could lead to mechanisms of sharing, collaboration, collective management and distributed cognition" (ALAVA, 2002, p. 47).

Under that perspective, it is remarkable that, by using blogs, subjects have the opportunity to exercise authorship in the Web instead of merely looking up/visiting websites. Subjects become contents emitters, according to Lemos (2008), since they are able to produce information and construct knowledge before various onlookers. In this work, the "old-school" essay talking about "my field trip" gave way to a multimedia account, with photos, video, and sound, which could be shared and (re) visited at different times, within and outside the school environment.

### Final reflections

Revisiting the concept of virtual community outlined by Rheingold (1996, p. 44), which suggests that virtual communities are "social aggregations that emerge from the Net", it is possible to verify the difference between the origin of a virtual community and that of a virtual

learning community. Whereas the VC originates from private interests, the VLC is created from a pedagogical proposal, with specific goals aimed at educational issues. In this perspective, it is clear that maintaining the engagement of the subjects in a VLC is a challenge, since private interests are not always in line with class proposals.

The analysis of the blog Novos Roteiros Turísticos em Novo Hamburgo, in the light of the indicators proposed by Paloff and Pratt (2002), has allowed it to be characterizes as a virtual learning community. It was possible to verify the existence of active interaction, collaborative learning, socially constructed meaning, sharing of resources and exchanges of expressions of encouragement between students and willingness to critically assess the work of colleagues. The most prominent characteristics are those related to the personal autonomy to build one's own learning and to share these discoveries with subjects from the other school.

It was also possible to identify the three levels of categories mentioned by Schwier (2007) to analyze the formation of VLCs. The communication between subjects is pointed out by the author as being "at the heart" of the community. Thus, communication is what maintains the community. In this perspective, Schwier (2007) points out that technologies facilitate the development of communities, but also can inhibit their growth. The experiment proved that the tool is easy to use, as pointed out by Amaral, Recuero and Montardo (2009), and suitable for various audiences, in this case, children and youngsters.

It is also relevant to point out that the community did not survive on its own, after the project had ended. This highlights the important role of the teacher as an organizer of collective actions. Thus, it is clear that the virtual learning community is closely related to school work and tends to not maintain itself without the presence of a teacher. However, the presence of a teacher alone does not guarantee the success of a virtual learning community. The teacher can propose the activity, demand engagement, but the students are the ones who will determine the effectiveness of a virtual learning community.

Thus, networks create a structure that enables the sharing of information, but new educational practices in cyberspace, that enhance pedagogical innovations to construct knowledge collectively, still need to be proposed.

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