COMMUNICATION AND INTERACTION IN A SEMI DISTANCE FINE ARTS COURSE AT UFRJ

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Research and Evaluation
Undergraduate Education
Description of the Ongoing Project
Scientific Investigation

Abstract

This article presents the partial results of a Master's ongoing research at the Federal University of Rio de Janeiro the intention of which is to investigate the possibilities offered by current communication and digital computer technologies, from an association developed among three research groups: GERGAV (Grupo de Estudos de Representação Gráfica em Ambientes Virtuais – Study Group of Graphic Representation in Virtual Environments), of the School of Fine Arts, LATEC (Laboratório de Pesquisa em Tecnologias da Informação e da Comunicação – Research Laboratory in Information and Communication Technologies), of the School of Communication and LAMCE (Laboratório de Métodos Computacionais em Engenharia – Laboratory of Computational Methods in Engineering), of COPPE (Instituto Alberto Luiz Coimbra de Pós Graduação e Pesquisa de Engenharia - Alberto Luiz Coimbra Institute Graduate School and Research in Engineering).

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1 Introduction

Communication is of extreme importance, in the classroom modality as well as at a distance. Currently, education professionals are increasingly concerned about the quality of the pedagogic communication used in their activities, in the planning of didactic material, the selection of evaluation support material as well as in the evaluation.

For Duart and Sangrá (2000, apud Sartori et al, 2008), virtual learning environments are spaces created with advanced communication technology resources and permit the interaction of numerous actors in the process, making it possible to create the conditions for relationships deferred in both time and space.

Manzanedo (2003, apud Sartre et al, 2008) states that VLE is a device that centralizes the management of educational objectives, the registers of both off and on-line academic activities and, thereby, making student pedagogic and administrative accompaniment viable, allowing for integrated action of the course management team. In this sense, flexibility, offering the conditions to form a virtual community and the feeling of being part of a group are important aspects for a VLE.

In line with this thought, Barajas (apud Nevado, 2005) stated that, for this type of environment to work, a modern and appropriate technological support system, as well as a coherent methodological proposal, one that makes actions and interactions concrete, is necessary.

While Santos (2003), defines a virtual environment as a space that is rich with meaning where human beings and technical objects interact and, thus, potentiate the building of knowledge.

Nonetheless, the most wide-reaching definition of the term is found in the following quotation:

> "It is a computational system available on the internet, destined to the support of activities mediated by computer and communication technologies. It allows integrating multiple media, languages and resources, presenting information in an organized manner, developing interactions

> between people and objects of knowledge, elaborating and socializing productions, aiming at achieving determinate objectives. The activities develop in the time, work rhythm and space in which each participant finds himself, in accordance with an explicit intention and prior planning, known as *instructional design,* which forms the back-bone of the activities to be done and is continually reviewed and re-elaborated throughout the course of the activity." (Almeida, 2003, p. 331)

The VLEs associate the interfaces that allow the production of the contents and the numerous communication channels, data bank management, total control of the information circulating in and throughout the environment. Furthermore, it makes it possible for a great number of geographically dispersed subjects to interact in varying time and space. (Santos, 2003). Similarly, Nevado (2005) affirms that these environments make it increasingly easier to access data and to communicate at distinct times, without the need for the learner and teacher to be in the same physical space.

Kenski (2007) defends that, even if the users are distant and access the VLE on different days and at different times, the "tele-presence feeling" should be guaranteed, as if they were physically together. However, for this it is necessary to set a "new pedagogy", that goes beyond the technologies available and the content to be worked on an educational project or discipline. As Haguenauer proposes:

> "The pedagogic project – instructional design – is responsible for the success of the teaching program. The correct choice of the media to be used and the means that the teacher uses to communicate with the student and the students to communicate amongst themselves, together with a clear pointing of the path to be followed are all indispensable to the success of the process" (HAGUENAUER et al., 2003 p. 54).

2 Interactivity and Interaction

For Silva (2001), interactivity is a communication concept and not a computing concept. It can be used to mean the communication between human interlocutors, between humans and machines and between user and service. According to Silva (2001, the term appeared in the 70's,) and became fashionable in the mid-80's, with the arrival of the computer with Windows, allowing the user a "labyrinthine entry and manipulation of content" and has currently suffered wear-and-tear because of use as a "selling point" or "advertising ideology".

For Belloni (1999), interactivity is a "technical characteristic that means the possibility of a student interacting with a machine". The author clarifies that the sociological concept of interaction has been indistinctly used and confused. Generally, the term is used as a potentiality technique offered by a determinate medium, such as hypertexts, CD ROMs or computerized games. On the other hand, there is the manner in which man, as user, "acts towards the machine and, in turn, receives, a "retro-action" of the machine towards him".

Moore (2007) suggests three modes of interaction: learner-content interaction, learner-instructor interaction, and learner-learner interaction.

Anderson (2003) amplifies Moore's reflections and includes three more types of interactions: teacher-content, teacher-teacher and content-content.

The sociological concept of interaction, according to Belonni (1999) consists of a "reciprocal action between two or more actors where inter-subjectivity occurs". In other words, a place where two subjects meet, directly or indirectly, and use some communication medium, such as the telephone.

However, Anderson (2003) stresses that there is no point in distinguishing between the terms interaction and interactivity as one should consider the role of man and machine in an educational context, respecting the role of each element: learner, teacher and content, since the machine is a mediating instrument of the interaction. Proposing that there is no distinction between interaction and interactivity, he argues that although some authors use it, such division is not widely used in DL literature.

Silva (2001) signals that, in reality, the self-denominated interactive schools continue to produce the old model of transmission. Likewise, Santos (2003) states:

> "It is not enough to create a site and make it available in cyber-space. As much as it might be hyper-textual, it is necessary that it be interactive. It is the interactivity with the content and with the authors that makes a site or software a VLE. For the process of exchanging and sharing feelings to be effective, we can create synchronous interfaces, like the chat rooms or asynchronous ones, such as forums and discussion lists. We can also count on the blogs which, besides offering synchronous and asynchronous communication, aggregate an infinite number of languages and forms of expression in its hyper-textual format."(Santos, 2003, p. 9)

3 DG Space Environment

The *Portal Espaço GD* (DG Space Portal) (www.eba.ufrj.br/gd) presents different learning resources to teach Descriptive Geometry, which incorporates the use of Flash animations, 3D environments generated in VRML - Virtual Reality Modeling Language – through digital modeling or photo-modeling. The site was created, via Web, to study Descriptive Geometry, which is an important subject used for the formation of professionals in numerous areas, such as: Fine Arts, Industrial Design, Architecture and Engineering. Its primary intended public is comprised of students of this discipline, offered for the 1st and 2nd years of Scenography, Clothing, Interior Design, Landscape Design, Sculpture and Licentiate in Artistic Education – Design Licentiate – from the School of Fine Arts of UFRJ. However, it is also available on the Internet to all interested internauts, students or teachers (Lima et all, 2008).

Moran (2004) believes that there are three important fields for virtual activities: research, communication and production. In individual research the concern is with themes, experiments, projects. In communication, the debate about these themes is sought, either on or off-line. Production is involved with result disclosing in hyper-text, multimedia, etc., formats so that the results are available to colleagues and, occasionally, to communities outside the course. As suggested here:

> "If the students made bridges between what they have learned intellectually and the real, experimental, professional situations linked to their studies, the learning would be much more significant, alive and enriching. The universities and the professors need to organize activities that integrate the practical and the theoretical, understanding and experiencing, doing and reflecting, in a systematic manner, classroom and virtual training, in all of the areas throughout the course (MORAN, 2007 p.100).

4 The Management System of Quantum Learning

The Quantum Platform is a management system of educational processes, known in the market as Learning Manager System (LMS), Academic Management System or Virtual Learning Environment (VLE), in this system there is great flexibility to generate evaluations, to make presentations and contents available, to accompany learning, to create registers and academic controls, including an opening for configurations (graphics and of functions). The team at CEDERJ - Centro de Educação Superior a Distância do Estado do Rio de Janeiro (Center of Distance Higher Education of Rio de Janeiro State), and which congregates six universities: UENF, UERJ, UniRio, UFF, UFRJ and UFRRJ, adopted a platform to serve the objectives of the virtual learning education process due to the large demand of distance education (HAGUENAUER et alli. 2002).

In the Quantum system it is possible to administer courses quickly and with total flexibility. From any computer linked to the network, the teaching body, coordinators and managers can have access to notes, reports, students' histories and updated material as well as disclose new activities and many other resources.

There are numerous tools available that make the on-line teaching-learning process viable: chat-rooms, forums, e-mails, libraries, downloads and web searches; FAQs, clarification of doubts and site maps, schedules, murals and bulletin boards. Besides these, there are tools for the administration of the learning process, as for example, creating groups, student registration, the selection of tools and attributing names to these tools.

4 Work Methodology

The **General Objective** of the ongoing research is to identify elements that influence the learning process in virtual environments. For such, the On-Line Classroom of the *Portal Espaço GD* will be focused. To reach the proposed objective, this study has the following **specific objectives**:

- Characterize the potentialities and limitations of some tools: e-mails, chat-rooms and forums in a virtual learning environment;
- Identify the elements that influence the interaction between teachers and learners.

Data collection is realized by filling out a probing questionnaire to verify the familiarity that students have with the internet. Furthermore, registers of on-line interactions are recorded by the quantum platform tutoring.

The tools chosen to comprise the VLE are: Schedules, Notepads, Chat-Rooms, E-mails, Forums, Downloads (renamed for Templates and Results), Mural, Frequently Asked Questions, Libraries (renamed as Sites) and Doubt Clarification.

Ulbricht & Vanzin (2006, p. 92-99) alert about the typical tools of virtual learning environments that “school metaphors, the classroom, the teacher” may reproduce the worn-out traditional education, therefore, their use should always be supported in solid pedagogic methodology.

Moran (2004) establishes some basic strategies for the beginning of a semi-distant course. He suggests that the teacher, when realizing an activity in the computer laboratory, should orient his students to study the significant internet material related to the contents to be studied and to distinguish pertinent information from non-referenced information. Furthermore, familiarity with the virtual platform, the tools and their functions is fundamental.

5 Final Considerations

The analysis of the speeches contained in the e-mails, chat-rooms and forums sought to enhance the possibilities and limitations of the communication resources in a pedagogic relationship which propitiated reflection,

argumentation, and the search for solutions, analysis and exchange of experiences among the participants. Many different forms of interactions between teacher and learner become possible with the use of the resources from the Quantum Platform of the *Portal Espaço GD*. The students could also, using the different tools of the platform, clarify doubts and contribute with figures, texts and tri-dimensional models. As Leffa states:

> "In the network society which we currently live, distance education is not only a possibility, but also a necessity. In a world where frontiers are constantly demolished, distance learning allows modifying not only the geographic frontiers, but also the limitations of time."(LEFFA, 2005, p.5)

As this paper refers to an ongoing study, rather than a partial conclusion, I would like to close with a commentary by Tavares (2007) who highlights that, although the approach of critical reflection is not only directed to on-line education, it has greatly contributed to confront theory and practice in the formation of teachers in this medium. The author indicates that, more than just technological training or on-line interaction through emails, chat-rooms and discussion lists, a deeper study of the content to be addressed is necessary and, therewith, remove the simplistic vision of "learn by doing".

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