

Communication and the distance education: the dialogue between interaction modes and the instructional design

Ademilde Silveira Sartori*

Education, Communication and Technology Research Group, Department of Education Methodology, Universidade do Estado de Santa Catarina. Servidão Ademar Manoel Bento, 11, Trindade, Florianópolis, SC, Brazil, CEP 88036635.

This article is about a qualitative research that investigated the relations between the Communication and the Distance Education in order to understanding the relations between the instructional design and the Technology of the information and the communication. The relevancy of the problem consist of the diminish the importance attached to the technology as responsible for the interactivity of a project, indeed the technology allows some interaction modes or present limits that can be compensated by the integrated use of diverse media and offers a tutorial system. In other words, the interactivity is not a direct function of the technology used in a course, but of the interaction mode foreseen in its instructional design.

Key-words: Communication ; Distance Education; Interaction Modes; Instructional Design

(Portuguese abstract) O presente artigo tem por base uma pesquisa qualitativa que buscou investigar as relações entre a Comunicação e a Educação na modalidade educativa a distância, tendo em vista compreender as relações entre o desenho pedagógico e as TIC. A pertinência do problema reside na desmistificação da tecnologia como responsável pela interatividade de um projeto, uma vez que uma determinada tecnologia permite vários modos de interação ou apresenta limites que podem ser compensados pelo uso integrado de diversas mídias e oferta de um sistema de tutoria. Em outras palavras, a interatividade não é uma função direta da tecnologia utilizada em um curso a distância, mas do modo de interação previsto no seu desenho pedagógico.

Palavras-chave: Comunicação ; Educação a Distância ; Modos de Interação; Desenho Pedagógico

1. Introduction

The present article is based on a qualitative survey that tried to investigate the relationships between Communication and Education in the distance education modality - DE, with the purpose of understanding the relationships between pedagogic design and TIC. The problem pertinent lies on the demystification of technology as responsible for the interactivity of a project, inasmuch as a given technology allows several modes of interaction or displays limits that can be compensated by the integrated use of several medias and by the offer of a tutoring system. In other words, the interactivity is not a direct function of the technology used in a course, but instead of the interaction mode contemplated by its pedagogic design [1, 2].

The survey carried out had as basic premise that the relationship between communication and DE is revealed in the communicational process management, whose guiding character established the basis to build the theoretical relationships, as well as to elaborate the instrument of collection of empiric data their consequent analysis.

As from the empiric investigation result, we could identify as promising the expectations of Distance Higher Education being guided by practices based on the Freirean dialogicity [3], at least as to the understanding of interactivity as participation and contribution for other people's learning. Interactivity is

* E-mail: ademilde@matrix.com.br

understood as exchanges among participants, which allowed us to affirm that the interaction mode contemplated by the project defines the interactivity degree, and not only the technologies used.

2. Interactivity and the interaction modes in DE

DE is an educative practice that ruptures with the idea that we only learn with a teacher talking to us on the front side of a classroom and if we are at this room at the same time, all together. This rupture was possible because globalization 'occurred', the requirement of workers with differentiated profiles, the social demand for education, the arising of the receptor/user/navigator, the corporations pressure for higher education and the digital development of telecommunications and of NTIC with their interactivity devices.

Otto Peters [4] affirms that the DE expansion cannot be regarded as a single-cause phenomenon, but we can identify a set of factors that indicate changes in the economic and social context in which the information acquires an unprecedented *status*. Elizabeth Saad [5] affirms that technologies act over information to transform economy and society, on the contrary of the previous revolutions, in which information made it possible to act over technologies.

The Information Society led DE to overcome its stigma of second-class education and to become a feasible education proposal for our time, that is, because it displays characteristics suiting it to the current society. According to Pierre Lévy [6], the ED characteristics are similar to those of the Information Society, as both are related to networks, speed, personalization.

The consensus among authors emphasizes the technological development in the field of telematics as a factor of DE expansion nowadays [7, 8, 9], especially in the IT and telecommunication areas, pressuring the access need to higher education, continued education, academic and scientific improvement. This context generated an impressive and diversified accumulation over the teaching and learning process.

The development of interactive technologies that provide learning and the collective building of knowledge by means of telematic networks, based on the permutability of the source and receptor roles, has been revealing to be a preponderant factor for the DE expansion. The cleavage between attendance and distance educational processes is in the necessary human and technological mediation of the latter [10].

Interactivity, for Marco Silva[11], is a particular type of interaction that displays three support pillars: Participation – Intervention: the information is no longer closed, untouchable, as conceived by classical theories, but manipulable, reorganizable, modifiable, allowing the receptor's intervention. In this process, the emitting source, the message nature and the receptor status are altered.

Bidirectionality – Hybridizing: the author affirms that since the sixties the source → emitter unidirectionality has been questioned as a communication conception, which started to be understood as possible if emitters and receptors interchange roles. This way, the emitter is potentially a receptor, and the receptor is potentially an emitter. Bidirectionality and hybridizing are related to the communication agents changes of roles, making possible the fusion of both of them in co-authorship.

Permutability – Potentiality: this interactivity fundament has its maximum realization in hypertext, but it is anterior to interactive IT and be found in the permutatory art. It is related to the authorship of actions of somebody who is no longer a receptor, spectator, as he or she interferes in the unfinished work that is modified as from his or her intervention, his or her cooperation. Thus, he or she becomes a co-author as from barter potentially allowed by the work.

The dialogical conception can be considered interactive because it starts from the presupposition of the student's participation-intervention, of the possibility of creation and or co-authorship. The content is not a closed information package, but material for intervention, displaying permutability-potentiality towards student actions. Communication is not unidirectional, but bidirectional, in the sense that it allows the source-reception interchange.

The dialogical education admits the need of communication among all those involved in the process, and therefore is based on another concept of communication, abandoning the idea of emission of message in the unidirectional direction source→receptor and admitting source-receptor multidirectional relationships as inaugurating communicative processes. The students acquire the *status* of coenunciators,

as meanings are collective constructions; only in co-enunciation it is possible to think about a dialogical relationship.

In DE systems, dialogicity and interactivity are intrinsically linked to the pedagogical design. An interactive pedagogical design allows participation, intervention, co-authorship, collective construction of knowledge, dialog, and the most diverse conditions of interlocution among students and professors. This discussion is extremely pertinent when we report to DE due to the inherent relationship between the educational modality in discussion and TIC, with their growth provided by digital technologies.

The interaction modes of a pedagogical design are revealed in the informational and communicational flows that feasilize DE as an educative proposal. The communicative flows occur in all processes involved in the provision of a remote course, from production to reception of the didactic material, from assistance to students, passing by the interaction among professors and students, and among the latter themselves. These types of flows can be summarized in the “one-to-one”, “one-to-many” and “many-to-many” communication modes. One-to-one communication can be associated to correspondence education, by means of the post office or the Internet. One-to-many communication, with education carried out by means of radio; and many-to-many communication, as one of those possible to be carried out through the Internet. The Internet can feasilize proposals in any one of the communicational modalities previously described.

Understanding the DE phenomenon as from communication means to change the mediatic-instrumental view, centered on the means of communication understanding as didactic instruments or resources, by that prioritizing the communicational flows, that is, the interaction modes feasilized by TIC.

3. The survey carried out

The qualitative survey carried out sought to investigate the relationships between communication and Education in the DE modality, with the purpose of understanding the relationships between the pedagogic design and the TIC as from the TIC location in the pedagogic design. The intention was to prove that the starting point for the preparation of a pedagogic design is linked to the target public, and that although it performs a constituent role, the choice of the technologies performing the mediation among professors and students is not carried out by managers only in function of the communicational devices that it offers, but mainly by the interaction ways contemplated by the project, which define the media choices, in function of the target public and access.

The data collection instrument is a questionnaire that was prepared in function of the selected target public diversity, in terms of formation, of the institution where they work and of the DE experience. The applied questionnaire was constituted by three large thematic lines: the DE role in education and work trends; the role of communication technologies in the course pedagogic design; and the DE issue, comprising the manager’s profile. Out of the 47 questionnaires sent by electronic mail, 29 were returned completely and correctly answered, which provides a 60% return rate, much higher than the expectation of 25% indicated by Marconi and Lakatos [12].

The surveyed target public was a heterogeneous group displaying formation and professional connection with different institutions, and therefore with the exercise of diversified functions. The group heterogeneity allowed a more comprehensive data collection and interpretation, which would not be possible if the survey were linked to a homogeneous public, that is, linked to a project of a single institution, which would led to the presentation of a particular view of the management and its communicative processes in an DE project.

The target public was composed by professionals certified in the Post Graduation level as Distance education Management Specialists, a specific formation and according to the survey topic. The fact of having attended a Specialization Course favored the predisposition to participate in a survey about communication management in DE, as they discussed in a privileged way the DE management and were involved with the academic production required by the forming institution upon the questionnaires application. The relevance of the selected public was in the fact of holding certificates that qualified them to development DE management actions.

3.1 Surveyed public description

The distribution of the respondents institutional origins is quite varied, and is divided between public and private universities, private education institutions, companies dedicated to DE, government agencies, companies and micro companies, among others. The institutions diversity verification displays the generalized interest that this modality has been arising in our country. The diversity of institutions corresponds to the different types of functions performed by the target public, such as professors, tutors, editors, civil servants, advisors, video producers, secretary services providers, qualification programs developers, among others.

The exercised functions reveal that institutions with different interests have been making efforts to form professionals of their organizational structures to develop their own corporate education projects, to fulfill the individual interest of persons for the modality, as well as the need of qualifying professionals that work in DE projects.

The set of respondents is formed by professionals of the areas of pedagogy, psychology, communication, veterinary, technology, systems analysis, among others. The DE is characterized by being a modality in which the team is necessarily multifunctional and multidisciplinary. The variety of professionals composing the target public fulfills this characteristics and evidence that DE can count on the contribution of several areas of knowledge and with professionals seeking multidisciplinary formations, which assures the dialog between professionals with different *backgrounds* and technically competent in DE.

The degrees vary from undergraduate degrees, specialists, MA's and PhDs, as well as MA and PhD graduate students. This scenario shows the interest in professional qualification, with the deepening of scientific and specific knowledge relative to the DE modality. The geographic distribution encompasses the States of Santa Catarina, Mato Grosso do Sul, São Paulo, Paraíba, Rio de Janeiro, Distrito Federal and Minas Gerais. The biggest concentration is located in the region close to the Institution that offered the course, in the States of Rio de Janeiro, São Paulo and Minas Gerais, probably caused by the requirement of participation in attendance meetings or of the personal presentation of the monograph. Given the geographic dimensions of Brazil, it is understandable a certain regionalization of the served public and the acknowledgment of the effort of some people who travel long distances in the quest for qualification. However, the offer of qualified professionals continues distributed in the center region of Brazil.

Just 28% of respondents indicated to have any formation in DE, and 42% have from 1 to 3 years of experience. These data display a strong demand for formation, and that such formation has been carried out in service. Besides, the professional involvement with the modality is a very recent fact, which displays and reflects the modality expansion.

3.2 Obtained answers analysis

The obtained responses analysis indicate the existence of a group of professionals concerned with interactivity as a dialogic process, of collective knowledge construction, which can serve as indicator of projects directed towards collaboration and participation, according to the main points of the encountered answers. Interactivity is understood as participation in the other people's learning and as co-authorship, and not in the access to several languages and information sources, which denotes a strong need of communicational and pedagogic procedures and devices allowing exchanges among those involved. Interactivity is more an issue of exchange among the participants than a technological characteristic.

The construction and exchange of meanings is not restricted to the participation of colleagues in the construction of knowledge, but also in the presence and work of tutors, considered indispensable for the modality. The tutor's mediating role is supported both in the emphasis attributed by the group in the contribution for the discussion and in the identification of the student's profile as somebody who interacts with tutors and professors. Significantly, automatic processes or processes providing responses to

the assessments requested from students at the pedagogic material end were disregarded, as contemplated by the Programmed Instruction.

The expected profile for the student of an DE course requests an adult person, responsible, participative, collaborative with the colleagues, main mainly capable of self-organizing himself or herself. Besides, he or she must be willing to learn and always learning. It is no longer conceived a course organized with unidirectional flow and a passive student. The possibility of participation-intervention is accompanied by the premise of responsibility. It is not an abstract action, as the meeting of deadlines and the quality of works presented continue being requirements for a good academic performance. For short, the interactivity favors the dialog, needs the tutors' mediation, but requires a responsible attitude.

It can be perceived that the image of DE as a modality based on individual isolation, on solitary learning occurred in the interaction between the student and the didactic material, with occasional tutorial support, is outdated in the view of the group in question. Contribute for this new concept of DE the communicative technological possibilities, the tutor role reiteration and the emphasis on the responsibility and participation attributed to the student's profile. The first is related to the technological development and its contributions for the even more diversified offer of communicational devices supplying the social-technical structure necessary to feasilize the teaching-learning process. The second, by acknowledging the importance of human mediations, which allow symbolic and affective exchanges of all orders, the feeling of belonging to the group, the virtual getting together and the agency of co-authorship processes. The third consists in the resonance of the times in which we live, in which interactive processes at large require initiative and an attitude of quest. Interactive processes based on intervention and co-authorship as potentiality require from that who is no longer a mere receptor, but a potential co-announcer and co-producer, the capability of dialoging and working in teams, and the willingness to learn how to learn.

A modality preconizing new pedagogic practices, the DE is prioritarily directed towards serving the adult public, with the role of democratizing the access to higher education, even by corporate education. Its most interesting characteristic is the convenience of choice, by students, of times and places to study and participate in asynchronous activities.

The instructional design must prioritize the integrated use of medias, but due to the reality of lack of access to the most sophisticate and expensive communication technologies, the focus must be concentrated on the use of printed material and on the provision of tutorship. Tutorship has been arising as a means to speed interactions among students, professors and the institution.

Planning and executing a project contemplating the aspects indicated previously are attributions of the project manager, who, for the respondents, does not need to display pedagogic formation or administrative knowledge. However, he or she must know well and cause the implementation of the course pedagogic project and have a view of the future. At this point, we identified a background issue that needs to be faced by those who developed DE projects: how can a pedagogic project manager waive pedagogic formation and administration knowledge?

The reason for such positioning by the respondents is, perhaps, in the diversity of formation encountered among them and in a fragile conception of the role of a manager – which we can verify in the last positions attributed to all more directly administrative factors, such as the preparation of a work schedule and of a financial project, as identified by the survey. The little interest that the pedagogic area displayed for such modality may have some degree of influence in the disconnection of the pedagogic dimensions from those related to management.

As the institutions, in general, are becoming interested in the provision of remote courses, or willing to integrate remote activities in their attendance courses, the preparation of projects started to require notions of management by the involved professionals.

Among the tasks of a manager there are the project elaboration, with the regulations, limits and parameters imposed by the applicable legislation; the typical demands of a pedagogic project – such as the target public choice, syllabus elaboration, interaction modes definition, among others; the development of typical management action – such as the preparation of schedules, contracting and qualification of teams, organization and maintenance of infrastructure, and financial administration. Although it is not

the manager's role to take care of the project's accounting area, he or she makes decisions directly related to costs; therefore, he or she is responsible for its feasibility and sustainability.

The last functions that we listed were neglected in the discussions about DE, which have been prioritizing those related to technology, didactic materials production strategies and tutorship. This scenario has been changing with the need of thinking about errors and hits, and especially with the more and more frequent development of projects provided by consortiums in the national scenario, which reveals the management issue. The institutions offering or intending to offer distance education are facing a historic moment in which they can answer the old criticisms received by the modality due to lack of continuity and of assessment, becoming competent in the preparation of projects and in the accounts settlement concerning the use of public money.

3.3 Results

As a result of the survey that we carried out, we could identify the importance of the communicational processes manager for the DE and of eliminating the emphasis given to technology in the debate about DE communication and place it on the interaction modes provided to those involved in the course. The interactivity implies the participation of the involved parties in the exchange processes conceived in the pedagogic design, which expresses the interaction modes and the technologies to feasilibilize them, to the need of providing mediation by means of tutorship and to the requirement of responsible students. The communication and the pedagogic design are in process of interlocution.

By publishing the survey result in this article, we intended to collaborate with the debate about the inter-relationships between Communication and Education and about the management of communicational processes in this modality, guiding the manager's work in the exchange processes and in the negotiation of guidelines. The communicational processes management, which certainly involve the technologies, but do not end in the offers presented, means to agency sets of production and direction circulation circuits among those involved in the planning, execution and assessment, as well as between professors and students, of a distance higher education course.

4. References

- [1] Ademilde Silveira Sartori. *Gestão da comunicação na educação superior a distância*. São Paulo: ECA/USP. Tese de doutorado (2005).
- [2] Ademilde Silveira Sartori. *A interlocução entre o desenho pedagógico e as TIC na modalidade educacional a distância*. XXVIII Congresso Brasileiro de Ciências da Comunicação. Rio de Janeiro: Associação Brasileira de Estudos Interdisciplinares da Comunicação, (2005).
- [3] Paulo Freire. *Comunicação ou extensão?* Trad. De Rosisca Darcy de Oliveira. 4ª ed., Rio de Janeiro: Paz e Terra (1979).
- [4] Otto Peters. *A Educação a distância em transição*. Trad. De Leila Ferreira de Souza Mendes. São Leopoldo: Unisinos (2003).
- [5] Elizabeth Saad. *Estratégias para a mídia digital: Internet, informação e comunicação*. São Paulo: SENAC (2003).
- [6] Perre Lévy. *Cibercultura*. Trad. de Carlos Irineu da Costa. São Paulo: Ed 34(1999).
- [7]. Desmond Keegan. *Foundations of distance education*. 2ed. Londres: Routledge, 1990.
- [8] Tony Bates. *Technology, open learning and distance education*. London: Routledge (1995).
- [9] Otto Peters. *Didática do ensino a distância*. Trad. Ilson Kayser. São Leopoldo: Unisinos (2001).
- [10] Marco Silva. *Sala de aula interativa*. Rio de Janeiro: Quartet (2000).
- [11] Ademilde Silveira Sartori e Jucimara Roesler. *Educação superior a distância. Gestão da aprendizagem e da produção de material didático impresso e online*. Tubarão: Unisul (2005).
- [12] Marina de Andrade Marconi e Eva Maria Lakatos. *Técnicas de pesquisa*. São Paulo: Atlas (2002).