Article

Interaction in distance learning pedagogy: The views of tutors and students

A interação na pedagogia a distância: a visão de tutoria e estudantes

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Abstract

This study shares the results of a survey that sought to analyze the process of interaction in a Virtual Learning Environment – VLE from the perspective of students and tutors of a distance learning course of Pedagogy offered by a Brazilian public university. Based on a critical paradigm and a qualitative methodology, this article presents a discussion on the role of interaction in distance learning courses, from the viewpoints of students and tutors. The participants´ concepts of interaction were analyzed from the dialectic and socio-historical perspective, according to which interaction is established in the social relations and mediated by the educator to promote learning. The results suggest that interaction is characterized as a form of communication that occurs especially in the virtual setting and it is strongly unidirectional and little interactional, as it occurs in only one direction, in this case, from students towards tutors as far as schoolwork is concerned. We conclude that both tutors and students need to reframe the concept of interaction, considered in the study as a process of 'wholeness'. Within the concept of 'wholeness', communication occurs so that the Interacting participant is wholly involved in the communication. Their perception of communication is twofold, simultaneous, that is, they see themselves as whole, both in interaction and in the wholeness process. The dialogs in this process occur in a historical, social and dialectical way. Therefore, we support a process that goes beyond interaction, that is, wholeness to promote effective learning in DE – Distance Education.

Keywords: Distance education, Virtual settings, Interactions, Pedagogy.

Resumo

Este estudo compartilha os resultados de uma pesquisa que buscou analisar o processo de interação em ambiente virtual de aprendizagem – AVA, na visão dos estudantes, professores tutores de um curso de pedagogia a distância de uma instituição pública brasileira. Fundamentado no paradigma crítico e na metodologia qualitativa, este artigo apresenta uma reflexão do papel da interação em cursos a distância a partir de depoimentos dos estudantes e tutores. As concepções de interação desses participantes foram analisadas segundo a perspectiva dialética e sócio-histórica em que a interação se estabelece nas relações sociais, mediadas pelo educador para promover a aprendizagem. Os resultados sugerem que a interação se caracteriza como forma de comunicação realizada principalmente no ambiente virtual pesquisado, com forte caráter unidirecional, pouco interacionista, porque ocorre numa única direção,

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em particular dos estudantes para a tutoria, a respeito de atividades entregues postadas no ambiente. Concluiu-se que tanto a tutoria quanto os acadêmicos necessitam ressignificar o conceito de interação, considerado no estudo como um processo de inteiração. No conceito de inteiração, a comunicação ocorre de modo que o participante em interação esteja inteiro, completo na comunicação. Sua percepção da comunicação é dupla, simultânea, ele percebe-se inteiro na interação e no processo de inteiração. Os diálogos em tal processo ocorrem de modo histórico, social e dialético. Portanto, defende-se um processo que vai além da interação, isto é, uma inteiração para efetiva aprendizagem na modalidade da Educação a Distância EaD.
Palavras-chave: Educação a distância, Ambientes virtuais, Interações, Pedagogia.

This qualitative study was written from research conducted in the period 2008-2013 and analyzes, from difficulties experienced by students and teachers, the interaction process in the distance course of Pedagogy (class 2008) of a Brazilian public university. The institution at issue has offered distance courses of Pedagogy, among others, in partnership with the Universidade Aberta do Brasil (UAB) – Open University of Brazil. The main objective of this study was to examine the difficulties experienced by the course participants in the process of interaction, both in the Virtual Learning Environment – VLE – and in the classroom setting. This article focuses on the statements of students and tutorials of this course.

The motivation for the research arose when the discipline *Education, Media and Technologies* was offered in the second term of 2008. At the time, the course format established one teacher for each discipline. The 450 students enrolled were distributed into 10 cities (stations). One professor was in charge of just two stations, and the tutors prepared by him replicated the lessons in the remaining eight stations. In these, the face-to-face and distance interactions were under the responsibility of the tutors (two tutors at each station – one distance and one face-to-face). Therefore, during the term of their discipline, the professor did not interact in person with the students enrolled in eight of the ten stations.

During the process, the course format changed in order to establish greater interaction among individuals and also as a result of public policies of the Open University of Brazil. The first changes occurred in 2009 (second school year), with a new coordinator. Changes in the guidelines established that two professors trained in the area would be responsible for each discipline. One professor would be responsible for the preparation of materials and the Student Teaching Guide (STG), and both would be in charge of the presentation of the discipline in face-to-face meeting, five stations for each.

One new aspect that is worth remarking concerns interaction, because, after the in-person meeting, professors no longer interacted with the students: the students'communications for the development and orientation of the discipline were in charge of the classroom tutor; whereas the interaction with the distance tutors occurred only to dispel doubts concerning the assessment of activities. With this methodology, the students were dissatisfied with the absence of the teacher and the insufficient interactions with the tutors.

The hypothesis that the dissatisfaction could constitute problems related to the interaction process led to the research object, namely the interaction among subjects. Moreover, the purpose was to present new possibilities of interaction in distance learning courses, especially in the distance course of Pedagogy – the empirical field of this research.

Several questions have been made about the research object, such as: What are the forms of interaction expected by the students enrolled in the course? Are these forms according to which proposals of interaction of distance learning courses discussed in the literature? To answer these questions, qualitative research was carried out based on the assumptions of dialectical historical materialism and critical view, whose results are believed to influence the individual's cultural and social reality and also the format of the upcoming courses to be offered in the aforementioned public institution.

The research, and also this article, whose theoretical framework is mentioned below, were justified by the changes required in this context and the relevant aspects of the course, such as: 1) the difficulties and grievances of the students, as reports and observations raised in pedagogical practices described; 2) The reissues graduation in Pedagogy at UAB system; and 3) The economic needs of the country for higher education offerings in Distance Education mode - distance education, which meet the quality benchmarks for higher education distance, proposed by the Federal Government (BRASIL, 2007).

Vygotsky's theoretical framework

The theoretical framework was characterized by the historical dialectical materialism approach, according to Vygotsky's (2003) view on the constitution of the subject that occurs from his social relations in the cultural milieu to which he belongs. For this author, the educational process is trilaterally active: the student, the teacher and the setting are active. In this context, the term active[3] comes from the word action and implies that all elements of the educational process act together to attain knowledge in a dialectical relationship between the subject, the object (knowledge), the historical and social milieu and other subjects.

This dialectic relation can be defined as interaction to the extent that the subject acts on the object (knowledge) in a social milieu, and interacts with other subjects, forming historical and social relations among them. In other words, this theory leads to the concept of interaction as a dialectical relationship of the subject with other subjects, with the object and with the environment, that is, with the world in which it operates and in which the mediation will occur for their learning and development.

In a sense, this framework is also based on the assumptions of dialectics, under which the relationship between the subject, the object and its environment is discussed, which thus requires an understanding of the real and concrete man in the basis of dialectical thought. The dialectical character of the educational process is characterized as a process made up of complex struggles and confrontations at the level of the subject's psychological nature. These conflicts, occurring in interactions

[3]   The meaning of the term active in the Novo Aurelio dictionary is "holding action, which acts […]" (FERREIRA, 1999, p. 225).

with the social, historical and cultural environment, are necessary for the constitution of the subject.

Vygotsky (2003) argues that the constitution of the subject takes place in the social, historical, cultural and dialectical relations that he establishes with the family nucleus (his first social milieu) and then with the subjects of their community, making and sharing a culture. Through interactive processes in activities with family and social institutions, the subject is made up historically and culturally, by developing, operating psychical internalization, and accumulating knowledge (learning).

In the context of studies of Vygotskynian team, Kostiuk[4] (2003, p. 19-20) states:

> The child's psycho-intellectual development takes place in the process of interaction with the natural and social environment. Driving the development through education means organizing this interaction, directing the child's activity to the knowledge of reality.

Thus, the aims of education are achieved when the potential capacities of the students are put into action. Interaction plays an important role in the child's intellectual development because "[…] it ensures the child's participation in the various activities necessary for developing his potential in all directions" (Kostiuk, 2003, p. 32).

In Vygotsky's (2003, p. 75) view, the individuals shape their behavior from their characteristics and the biological and social factors of their own development. The biological factor determines the reactions inherited, in whose limits the body triggers the system of learned reactions: "[…] this new reaction system is completely determined by the structure of the environment in which the body grows and develops. For this reason, all education inevitably has a social character".

In this thought, an analytical reflection was made of the principles that guide the interactive processes between the subjects using the virtual environment, from the perspective that these principles are the same as in-person interactive processes, as both are the result of a social process whose purpose is to form a critical citizen conscious of his role. The premise imposes two questions: What are the relevant interactive processes? What aspects can ensure the dialectical interactions for effective learning in the virtual context of distance learning courses?

For Ferreira (2008, p. 30), "[…] the acquisition of knowledge takes place through the interaction of the subject with the environment. The association of social interaction and the linguistic instrument is decisive for the development of the individual[5]". Likewise, Freitas (2009, p. 4) explains that "[…] knowledge is not acquired, but built in relation to the other. A dialectical relationship between subject and object, that is, between subject and historical environment". Therefore, the student reaches new knowledge by means of the intervention of a more experienced colleague or a teacher. Also, the author names this learning collaborative, shared, and argues that it is necessary to fit it with the demands related to the use of internet and computer

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4   Kostiuk was collaborator of the Psychology Institute of the Ministry of Education of Russia, Ukraine, Kiev.

5   Emphasis added by author.

in the teacher training: "[...] the interactive communication poses a challenge to the school focused on the transmission paradigm [...]" (FREITAS, 2009, p. 7).

Learning in the context of interactive distance education becomes relevant and possible provided that the subjects involved be aware of it and not generalize it to any project. The organization should be the result of fundamentals that provides networking training and "irreplaceable dialogue" (ALONSO, 2010, p. 83) to promote learning. Meetings – online or face-to-face – are essential for learning and strengthen the idea that the principles that guide the distance interactive processes do not differ from the presence ones.

For both Belloni (2001a) and Alonso (2010), distance learning (DL) has used technological resources available in order to "mediate" learning. According to Alonso (2010, p. 86), "[...] the technical means assume importance in DL, [...] the communicational, [...] significant, understanding, and interactive aspect will determine [...] the learning process". This author defines "mediating" as "coding pedagogical messages [...]" (ALONSO, 2010, p. 86).

One must also consider what Primo (2007) maintains on social network: a means of social construction of online or offline knowledge that does not happen only by terminal connections, but remains dependent on the interactions among those involved. Thus, social relations in VLE depend on the interactions in these spaces and should intentionally be promoted to favor the collective construction of knowledge. With this in view, how to conjugate the verb interact in this context?

The interaction in the socio-historical perspective

The word interaction is composed of *inter*, the Latin-derived prefix meaning "between, in the middle of", and the feminine noun action, whose concept is "[...] acting, act, deed, work [...], a nominal suffix with the basic notion of act" (FERREIRA, 2008, p. 56). The "action between" is also seen in the Vygotskynian idea of the dialectical relationship between subjects of an educational environment. In this context, interaction occurs when the subject acts on the object (knowledge) in a social environment, and interacts with other subjects in the social and historical relations established between them. In other words, that theory leads to the concept of interaction as a dialectical relationship of the subject with other subjects, with the object and with the environment, that is, with the world where he belongs and in which the mediation for learning will occur.

In addition to the significance of interaction in the socio-historical perspective, the word was also understood in the VLE setting. This is a non-exhaustive discussion in which some concepts of interaction proposed in the literature are presented.

In Social Sciences, social interaction means "reciprocal influence of the acts of individuals and groups that usually takes place through communication. This definition includes the interaction of a person with himself" (SILVA, 1986, p. 624), or, according to the same author, social interaction as "[...] the reciprocal influence between people or social forces" (SILVA, 1986, p. 624).

The concept of interaction is not unanimous, especially among the authors who discuss interaction in digital or online learning environments. For example, Primo

(2007, p. 5) proposes a definition based on the meaning of the word interaction: "[...] action between. That is, a polarized view of communication is avoided." The focus is on "between"; the interaction between people is typified as social (PRIMO, 2007, p. 5).

Belloni's (2001a, p. 58) view is that interaction occurs not only between individuals, but constitutes a reciprocal action both directly and indirectly. Under a sociological aspect, it means "[...] reciprocal action between two or more actors, where inter-subjectivity occurs". However Monteiro, Ribeiro and Struchiner (2007) address inter-subjectivity as the opposite of interactivity (a system in which the answers are dependent on the combinations performed and/or contracted by the user). Inter-subjectivity happens in human relationships and the answers not always occur in the expected direction.

These ideas converge to the extent that interaction is the action between two or more subjects, in a communication context in which the speeches are not always expected or agreed, away from any strategy, however planned it may have been. Interaction can be conceptualized as a two-way communication between the participants of an educational space, either an online teaching setting or not, where there is no censorship, but the methodological rigor of teaching and the intentionality of the professor in this context do exist.

Almeida and Prado (2003, p. 72) corroborate this definition on defining interaction as "colaborativeness" in a cultural-historical perspective, essential for the creation of a DL culture. The authors conceptualize it as "[...] a communication and collaboration network, in which all inter-relate."

Primo (2007) contributes to this discussion by arguing that the action of the professor in the online setting, despite all technological mediation, is relevant not only to make the interactions and social relations dynamic, but also to organize the processes involved: interactions, teaching and learning itself.

Monteiro, Ribeiro and Struchiner (2007, p. 3) argue that interaction in a virtual forum and the communications that take place there can be analyzed under Habermas' view, according to which the discourse leads to consensus, from arguments that make large use of replying resources. Thus, interaction means: "[...] attentive listening to the experiences reported [...] talking to each other and listening to the other, trying to understand what is said, apprehending the other's world, reflecting, disagreeing, agreeing, talking back, replying, reconsidering."

Following a different trend, Valente (2003, p. 31) distinguishes three modes of interaction: a) message broadcast in the ratio of "one for all"; b) traditional virtualized classroom (one answer to one question); and c) the "virtual being together", when multiple interactions occur. Under his view, the teachers' actions are "[...] to constantly monitor and advise the learner [...] to understand what he does and to pose challenges that help him give meaning to what he is developing". The subject formation is favored, based on a process in which teachers and tutors are committed to the educational act.

The dialectical perspective of the interaction process in an educational setting, whether virtual or face-to-face, provides dialogue, communications between those who agree with each other or who do not, then configuring a cultural and historical-social educational environment whose main features can be classified as dynamic and social from the human actions that take place in such an environment. It is in the pursuit

of understanding, through communication and dialogue, that the human being transforms his social environment in the relationships established.

This dialectic basis, therefore, in addition to guiding the creation of new forms of interaction that trigger cultural and/or social changes to solve complex problems, both technical and technological, also determines communication routes where interactive procedures move towards a new interactive[6] and wider process. To characterize this process, the authors of this study have coined the word wholeness.

Under this concept, communication occurs so that the interacting subject participates in a process in order to belong to it, to take part in it and to feel whole by means of communication, dialogue. His perception of communication is twofold, i.e. of complementarity and dialogue at the same time, and he feels himself "whole" in the interaction. Thus, dialogues in this process occur in a historical, social and dialectical way. The following item presents the research methodological process.

Research methodology

The methodological procedures are based on the assumptions of qualitative research and critical paradigm, which subsidized the analysis of interviews and questionnaires filled in by 210 students and 19 tutors. The semi-open questionnaire contained four basic themes: I - Student identification II - Concepts of: distance education, profile of the DL professor, profile of DL student, assignments of DL tutor; III - Interaction in VLE; IV - The quality of the interaction in the course. Such themes were defined and organized in four items with a group of questions for each item, with the purpose of raising the subjects' cultural aspects, their views on the course and the interaction process.

The interviews, conducted with 22 students, were based on a script of 30 to 40 semi-open questions that could vary according to the answers. The criteria for selecting the students for the interview was set by the voluntary participation of approximately 10% of those who responded the questionnaire and attended the face-to-face meeting of the discipline Libras (Brazilian Language of Signals) in each station. The students were identified by the initial letters of the city and a number. Examples: the three students of Siqueira Campos station were named SC1, SC2 and SC3, respectively.

The tutors interviewed totaled 19 (15 classroom and 4 distance settings). For the interviews, a script organized in three blocks of questions was used, namely, 1) Professional information; 2) The experience in the DL course of Pedagogy; and 3) The interaction process in VLE. The tutors were also named by letters, numbers and acronyms of the cities where their stations were located. An example of acronym is TP1A: TP = Classroom Tutor, 1 = tutor number, and A = Apiaí (city).

To analyze the interviews, categories have been established, a process performed according to the idea of extracting the essence of the speech; from that idea, a common term was chosen in each category. This procedure was based on Bardin's (2006)

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[6]   The online Portuguese dictionary defines interaction as "act of becoming entire, to complete" (DICIO, 2012).

theory of content analysis and on the categorization procedures pointed by Gamboa (1998). For the latter, the category expresses a more general view.

In the analysis of the interactions, in addition to Gamboa's, Mortimer and Scott's (2002) ideas derived from the studies of "communicative approach" were used. The latter remarked that the process of construction of meanings in the individual is made from discursive interactions between teachers and students in the classroom. On analyzing these communications and interactions, three categories were proposed: 1) Focus of education, where the teacher's intentions and the contents are analyzed; 2) The communicative approach and its different patterns of interaction; and 3) Actions in which the aspects analyzed and presented are the patterns of interaction and the teacher's intervention.

On the communicative approach, Mortimer and Scott (2002) consider different patterns of interaction given by the various educational interventions, and four types of communicative approach, classified in two dimensions: from the speech between teachers and students, and between students and students. The communications between them may be dialogue speech (interactive) or authority speech (non-interactive).

The dialogue communication occurs when the teacher communicates with students in the classroom and listens to their views on the contents studied, organizing an *inter* animation of ideas. In the authority communication, the teacher listens to what the student has to say about the content from the scientific point of view. All interaction includes aspects of both approaches of communication, that is, dialogue and authority.

Considering that VLE is composed of an online classroom and that the interactive processes that take place in this environment are online educational activities, it is believed that Mortimer and Scott's (2002) categories of analyses, suggested for face-to-face interactions, are suitable for the analyses of virtual interactions. Thus, these discursive categories were organized according to Mortimer and Scott and based on references that deal with interaction in virtual settings. Vygotsky's (2003) framework was also used to support the analyses of the categories of interaction taken from the speeches.

The following item presents the data analyses of a) the questionnaires given to students, b) the interviews with 10% of students in each station; c) the interviews with the tutors found at the stations during the data collection; and d) the interviews with distance tutors.

Analysis of results

This section presents the data tabulation of two types of participants: students and tutors (distance and face-to-face). The category with the highest occurrence was *Communication, Contact, and Indefinite*; and the categories with little occurrence were grouped in an item called *Other Categories*.

Among the criteria used for the classification of categories, Bardin's (2006) view of content analysis was used with regard to the nature of the message code, in this case, a language code written from the answers to the questionnaire given to the students involved in the communication.

In the words of Bardin (2006, p. 33), the content analysis is "[...] a set of analysis techniques of communications, using systematic and objective procedures of description of the content message." In this technique, the author suggests that the speech be objectively fragmented into coding and record units called categories extracted from the statement essence (BARDIN, 2006, p. 31). The procedures used to extract the categories were based on the frequency the terms occurred. Therefore, the terms C*ommunication* and *Contact,* recurrent in the messages, constituted categories with the following meanings: category *Communication* covered the terms "answering questions", "exchanging knowledge", "exchanging ideas", "listening", "hearing", "having a voice" and "constant dialogue". In turn, category C*ontact* meant, for the students, "spending more time with the teacher, physical, direct contact", "in person or distance contact", and "a contact with the presence of teachers, tutors and colleagues".

The results were therefore discussed from the analysis of the interaction categories presented in the order of data tabulation, i.e. firstly the categories found in the students' statements (Table 1), and then the categories found in the data collected in interviews with distance and in person tutors (Chart 1). Table 1 also shows category *No Response (NR).*

Analysis of questionnaires: interactions in the students' view

It is observed in Table 1 that the most frequently found category is C*ommunication,* with 130 (61%) of cases in 210 questionnaires answered by the students of the 10 stations. This category covers the terms "answering questions", "exchanging knowledge", "exchanging ideas", "listening", "hearing", "having a voice" and "constant dialogue".

Chart 1. Synthesis of the conceptions of DE of the four distance tutors

Distance tutors	Categories
TD1P	Relationship
TDAC	Comunication
TD1CO	Contact
TD2P	Relationship

Source: Organized by Batista and Gobara (2013)

Table 1. Categories of the students' concept about interaction

CATEGORIES/STATIONS	C	CO	I	OC	NR	T
1 – Apiaí/SP	20	03	01	06	02	32
2 – Água Clara/MS	06	00	00	01	00	07
3 – Camapuã/MS	05	01	01	01	00	08
4 – Cidade Gaúcha/PR	06	00	04	01	00	11
5 – Cruzeiro do Oeste/PR	25	04	04	03	01	37
6 – Nova Londrina/PR	15	02	03	07	01	28
7 – Paranavaí/PR	20	04	02	07	01	34
8 – Rio Brilhante/MS	01	00	00	04	00	05
9 – São Gabriel do Oeste/MS	13	03	03	01	00	20
10 – Siqueira Campos/PR	19	03	05	06	00	33
Total	130	20	23	37	05	215

Table 1 subtitles: C – Communication; CO – Contact; I – Indefinite; OC – Other Categories; NR – No Response; T – Total. Source: Organized by Batista and Gobara (2013)

This category comes closest to the dialogue communication discussed by Mortimer and Scott (2002), and also to the dialectical interaction adopted in the theoretical discussion of this research – in an interactional and socio-historical perspective. The terms identified in this category feature a two-way communication, occurring, therefore, when there is the exchange of ideas and knowledge, that is, in the act in which the subject socializes his knowledge.

The analyses of the statements belonging to this category were performed from the verification of this conception in the essence of the speech. The discourse below exemplifies the category: "*Interaction is the communication that should exist between student, teacher, tutor and fellow classmates*" (S23C, Feb/2011). This answer shows that S23C conceives interaction as communication. Among the course participants there must be interaction as the dialectical relationship that occurs in the educational basis proposed by Vygotsky (2003), that is, interaction should not be only communication but have a complementary nature, as proposed by the authors of this study.

In the same category is the example given by S24SC (March/2011) on interaction: "*It is the communication, the exchange of experience, the convergence of different points of view on the same theme.*" This concept can be considered as an approximation of Mortimer and Scott's (2002) interactive dialogue communication. According to the researchers, in a dialogue communication the teacher communicates with students, listens to their viewpoints on the study contents and organizes ideas among the lesson participants, which can occur in both a traditional classroom and a virtual setting.

In a general analysis of category *Communication*, it was found that, for most students, interaction is understood as the communication involving all the course participants: teachers, students, classroom and online coordinators, and the distance and presence tutors. According to Mortimer and Scott (2002), the process of meaning construction in the individual is made up from discursive interactions between teachers and students in the classroom. In addition, according to the historical and sociocultural assumption, interaction meaning a communicative action is configured as wholeness (a complementary feature) in a dialectical relationship among the course participants.

Still in category *Communication*, S9A's statement (Feb/2011) is another example: "*Interaction, for me, is an exchange of experiences, and it does not happen with the tutor in distance learning.*" He sees interaction as a two-way communication between pairs, i.e., one in which the information is received by one route and transmitted by another. The two-way communication occurs when there are a receiver and a transmitter (PRIMO, 2007). The speech analysis shows a criticism to the communication or interaction occurred in the course, because communication has only been one-way.

Category *Indefinite*, with 23 cases in 10 stations (Table 1), involved answers like "interaction is interacting." This category was observed in responses in which the subject conceptualized interaction by making use of the term itself, just by changing its verb form, such as "*Interaction is when you have any questions, interacting with the group*" (S5SC, Mar/2011). This student's concept of interaction shows that not all participants of the DL course understand their role in this context, according to Belloni's (2001a) analysis.

It was also seen in S32SC's answer (Feb/2011): "*Interaction is a key instrument in a distance learning course.*" The term instrument refers to a means by which man transforms nature whose final result is his own transformation (VYGOTSKY, 1991, p. 40).

An undefined concept of interaction was seen in S26P's answer (Mar/2011): "*It is the balance, the necessary support for the student.*" Here interaction is related to the act of taking the student to balance, a necessary support, but it remains unclear of what and for what. A distance learning course in which participants establish dialectical interactive relationships gives the student the notion of his role and of what he should be responsible for in both in-person and virtual meetings. The answer, inserted in category *Indefinite*, highlights, once again, the absence of dialectical interactive relationships in the course at issue, not matching the methodological proposal of interactional basis announced in the pedagogical design of course.

Category *Contact* (Table 1), with 20 occurrences in 10 stations refers to the students' desired contact and was analyzed from Valente's (2003, p. 31) idea of "virtual being together". Teachers, students and tutors can be virtually together in "multiple interactions". In this view, the teachers' actions go beyond online contact, they are expressed as monitoring and advising the student so that he may feel accompanied and assisted.

An example of this category can be noticed in student S7A's answer (Feb/2011): "*They are those contacts that happen in everyday life, either in person or at distance.*" The speech shows that, for this individual, either in-person or distance contact guarantees interaction; however, there is no explanation, for example, as to how these contacts are made, if the distance meeting occurs in the course virtual setting.

The physical or virtual presence of a tutor and/or professor does not always guarantee the interaction considered in category *Contact* mentioned by S7A. The teacher's role at the base of the educational process, from the psychological point of view, is that of an organizer of the interactions in the educational milieu; interaction that occur through social and dialectical relations (Vygotsky, 2003, p. 75).

Other answers were not classified into the categories identified as *Communication, Contact, Indefinite* and *No answer*, although they were associated with interactions because of terms like "relationship", "meeting", "feedback", "confused" and "participation". These answers were grouped into a single category called *Other categories*, as they occurred at frequencies lower than three answers.

The overall analysis showed that students see interactions as communication about activities, to solve learning problems and rarely for debate or for the collective construction of learning and development from a dialectical discussion of contents. This view illustrates the recurring interaction in traditional classrooms, generally based on transmission paradigms (FREITAS, 2009) and against the interactionist assumptions.

In a way, the speech of a student is surprising as he seems to have been punished in a DL course: interaction is "*To understand what you ask do, and be understood. Note: the class I belong to is* [...] *dissatisfied with the distance tutor* [...]. *She does not help, just punishes.* [...] *she is different from the other one* [...]" (S13A, Feb/2011). This student's speech reveals his dissatisfaction with the authoritative practice

established by a tutor, with whom there is no understanding and therefore, for him, a dialogue interaction is missing, in the meaning proposed by Mortimer and Scott (2002), according to which the student listens and is also heard. By means of this analysis, the statement unveils the tutor's unpreparedness for the job. In this regard, Belloni (2001a) argues that DL teachers must develop a profile suitable for this mode.

Analysis of interviews: interactions in the students' view

The analysis of interviews with students revealed two other categories: *Listening* and *Relationship*. Category *Listen*ing approaches category *Communication* in that it means listening, and may be classified as a suitable conception of interaction, because interaction in an online forum means attentive listening to the experiences of the individuals who post messages on the virtual forum, as Monteiro, Ribeiro and Struchiner (2007) conclude.

Student ACG's statement showed a concept of interaction with the meaning of communication, an inter-action, according to the communicative approach created by Mortimer and Scott (2002).

Interaction as communication is also found in the view of two students from Cruzeiro do Oeste. AC1's and AC2's concepts of interaction relate to the category *Communication*, whereas AC3 presented an undefined concept. Category *Communication* prevails for these three subjects and supports the concept of interaction of most students of this station, as it occurs from communication.

In Rio Brilhante station, ARB1 said that interaction is based on direct communication with the teacher to dispel doubts. Her speech illustrates a traditional conception of education. The desired type of interaction seems to be reduced to the traditional and hierarchical relationship between teacher and student. Belloni (2001b) indicates that the technology-mediated distance education requires new models of students, individuals who develop autonomy for self-education.

In the following section, the tutors' speeches will be analyzed and discussed.

Analysis of interviews: interaction in the views of face-to-face and distance tutors

The 15 tutors analyzed were identified by acronyms: TP1A and TPSGO refer to Classroom Tutor 1 of Apiaí and Classroom Tutor of São Gabriel do Oeste, respectively. Acronym TPCG refers to the only presence tutor of Cidade Gaúcha. Acronyms TPA1CO and TPA2CO relate to the presence tutors A1 and A2 of Cruzeiro do Oeste, while TP1NL to the presence tutor of Nova Londrina.

Six out of 15 tutors conceived interaction as communication: "*I think communication there is the first thing, you know, for you to actually interact with the person there has to have communication, and communication has to be effective* […]." (Interview, Feb/2011 TP1A). For this tutor, a sufficient interaction is the one that permits fruitful, efficient communication. Such communication can be configured as a dialectical interaction to the extent that the participants of the educational context are "whole" and dialogue with each other and with knowledge.

In category *Communication*, interaction can also be the exchange of information, dialogues, discussions, in the words of the presence tutor of São Gabriel do Oeste: "[...] *it is this exchange of information, dialogues, discussions. Of the student getting to know each other, interacting about the course*" (TPSGO, Feb/2011). The concept of interaction as communication is also identified through the tutors' statements, like that found in the students' speeches. In Vygotsky's view, interaction occurs from the regulation of the environment performed by the teacher.

In category *Contact*, interaction was defined as both in-person and online contact, what can be seen in the following statements: "*It's all that contact we have with the students, from a motivation that a face-to-face tutor has to take to them*, [...]" (TPSC1, Feb / 2011). Also: "*contact, not only physical, but the fact that you're exposing, and someone is responding; this would be interaction, not only physical*" (TP1NL, Mar/2011). This view shows interaction as "virtual being together", discussed by Valente (2003).

For the presence tutor of Cidade Gaúcha: "[...]. *interaction* [...]. *is everything because it is the support*, [...]." (TPCG, Feb / 2011). The concept of interaction as support shows an understanding of the relevant role interaction plays in virtual settings. It shows that virtual tutoring is a key factor in distance teaching and learning processes, as argued by Rivilla, Garrido and Romero (2011).

The statements of the two presence tutors of Cruzeiro do Oeste (TPA1CO and TPA2CO) showed their uncertainty about what interaction is, or what it should be, as their speeches display: "*exchanging ideas, would it be so*?" (TPA1CO, Feb / 2011). This answer reveals doubt and/or fear of expressing an inadequate idea, or confirming it when returning the question to the interviewer. This behavior was also observed in surveys with teachers and tutors carried out by Preti and Oliveira (2004), who concluded that such uncertainty is a result of the lack of capacity to act in this mode of education and in online culture.

Tutor TPA2CO is doubtful about what interaction would be: "*It would be the teacher who is there, in the distance, and the student who is here, I don't know, but* [...]. *the distance education student learns much more than the classroom student* [...]. *And those who say that the distance student does not learn are lying. He does learn. A lot.*" (TPA2CO, Feb / 2011). This tutor diverted attention from the discussion of what interaction is and pointed to an existing prejudice associated with the idea that DL does not promote the desired learning; she also even states that DL is more effective than classroom teaching. This answer exposes her uncertainty regarding the existing prejudice on DL, as shown by Marques and Cavalcanti (2009).

Thus some criticism of the subjects is observed in this study, and it is questioned the extent to which the supposedly interactive processes between teachers and students are taking place for the formation of these subjects. Especially in this case, when the professor is neither physically nor virtually present, and he counts only with the virtual tutor. In other contexts, researchers like Alonso (2010, p. 86) focused on the theme; she addresses DL systems and their coexistence with other DL systems, like the communicational, "[...] which allows students/teachers/tutors interaction and the monitoring and evaluation to validate the teaching/learning process [...]."

According to Belloni (2001a, p. 27-28), the teacher's role must be re-dimensioned so that he may act critically and in mediation with DL students: "[...] The teacher tends to be largely mediated, as a producer of messages written in technological means for DL students, [...] and a mediator between these media and the students." The same can be said of tutors.

In a socio-historical and interactional, Vygotskynian approach, Freitas (2009, p. 2) states that the teaching practice making use of technology has the purpose of "[...] creating other forms of learning: a shared learning that provides live dialogue in its tensions, conflicts and new formulations." Almeida and Prado (2003, p. 82) share this view by assuming that the interactive processes in DL are essential to the development of attitudes in the student, of actions with autonomy and integrity, contributing to their own learning process as well as to his colleagues'.

In summary, it was found that some tutors, as is the case of TPA1CO and TPA2CO, are not yet aware of their role as people responsible for the organization of the educational environment. Nor are they conscious of the relevance of their presence in this setting, both a traditional and virtual classrooms. The importance of the teacher's role in the educational environment is "immeasurably greater", in Vygotsky's (2003, p. 77-79) words.

Analysis of interviews: interactions in the view of Distance Tutors

Four distance tutors were interviewed between December 2011 and January 2012. They were contacted by email and their interviews, although being scheduled online, were conducted in person and recorded by a digital recorder.

The interview script presented to the distance tutors was the same applied to the presence tutors. The analyses presented in this article refer only to the question: "In your view, what is interaction in a DL course?"

The identification of the interviewees followed the same criteria of creation of acronyms used for classroom tutors. Thus, TD1P refers to the distance tutor 1 of Paranavaí; TD2P to the distance tutor 2 of Paranavaí; and TDAC refers to the only distance tutor of Água Clara. Regarding the methodology of categorization of speech elements, the previous procedures were also adopted here.

The categories about interaction in found the interviews with distance tutors were: *Relationship, Communication* and *Contact,* whose meanings are, respectively, "teacher/student relationship" "exchange of ideas" and "listening to the other and speaking to each other."

As to category *Relationship*, TD1P (Jan / 2012) replied: "*Interaction involves the student-educator relationship.*" For this tutor, interaction is the relationship established between teachers and students. This relationship can be analyzed from Vygotsky's (2003) point of view, according to which the teacher does not educate, rather the subject educates himself when interacting with their peers. The educator's role is to organize the means for these interactions to occur.

Still in category *Relationship,* and following the same way of thinking, tutor TD2P remarked: "*Interaction, for me, is a relation, is a relationship, we folks have a teacher-student relationship* [...]". (Interview, Feb/2012). This tutor's view complies

with Freitas's (2009) interactionist argument, that it is in the relation to the other that knowledge is built.

In category *Communication*, interaction is "*exchanging ideas*" (Interview, Jan/2012) for distance tutor TD1AC. Such concept simplified the tutoring role; she does not show a theoretical basis such as Preti and Oliveira's (2004), that regards interaction as mediation, which also contributes to the learning process.

The concept of interaction as exchange of ideas was also presented by classroom tutor TPSGO, of São Gabriel do Oeste station, but she went further in her definition in pointing out that interaction is, in addition to exchange of information, holding dialogues and discussions.

Chart 1 shows a summary of the categories present in the distance tutors' statements.

In analyzing the speeches, it was found that even though distance tutors provide relevant concepts of interaction, categorized as *communication* (exchange of ideas), *relationship* (relation) among the participants, and *contact* (listening to the other), they are not theoretically prepared for exercising a "good interaction" yet, according to Moran (2005).

In a general overview of the concepts of interaction of tutors interviewed, some limits about the training of these professionals were evident. This conclusion leads to the need for measures and/or proposals that address the effective training of distance and face-to-face tutors, with a thorough definition of their roles and the methodology to be followed.

Conclusions

This study investigated the views of 210 students, 15 classroom tutors and four distance tutors of the ten stations of the Pedagogy distance course. The considerations point to a concept of interaction with the significance of communication for both tutors and students. For most respondents, the interaction held in the course, specifically in the virtual setting, has a one-way communication feature, as it occurs to one direction, and far from being totally interactionist. This interaction, seen as unidirectional especially from students towards tutoring, refers to activities required in the disciplines and posted on the setting. It has proved inadequate in the face of the students' unanswered requests and questions. It was found, therefore, that the communication mentioned in the subjects' statements does not constitute, in fact, interaction because students said they had many questions/doubts that were not answered/dispelled through communications in the virtual setting, reason for which they made clear the need for in-person contacts with tutors to receive information and ask questions.

What is surprising is not only to confirm what was already supposed – that, in the context studied, interaction is synonymous with unidirectional communication –, but to verify that the students claim the professor's physical presence as a way to perpetuate the passive relationship (typical of traditional education), and also to discover that the course proposal corroborates this teaching practice. Not all participants are seen to fit this education paradigm; some respondents, students as well as tutors, maintained that they did seek socialization of knowledge and other

forms of interaction to get their questions answered. They did so whether within or without the course setting, for example, by using MSN[7], messages via mobile or land phone, or personal e-mail (in this case at the expense of a collective interaction and outside the VLE organization).

DL is still seen by students as easy education, in the mode of *laissez-faire,* not implying methodological and theoretical rigor to acquire knowledge in comparison to classroom teaching, as has been identified by recent studies like Marques and Cavalcanti's (2009).

Most tutors considered the communications among the subjects relevant, a concept supported by Rivilla, Garrido and Romero (2011), whose discussions, however, present some limits to the extent that they do not point indicators for training professionals to work as VLE tutors. These authors argue that virtual tutoring is a key factor in teaching and learning of distance education processes. In addition, this approach requires an in-person tutoring committed to collaborative interaction for learning in virtual settings where everyone must take the principles of effective interaction. Teachers and tutors play pivotal roles in mediation and interaction with a view to pedagogical "wholeness", an interaction in the dialectical and Vygotskynian perspective. To Belloni (2001b), this perspective refers to new clothing to old practices with teachers who have been poorly trained throughout their lives.

This study presents a contribution in the major of teacher training, especially of distance courses of Pedagogy, pointing out the limits of the interaction process experienced by students and tutors of a Pedagogy distance course of a public institution. It also signposts possibilities by proposing a reinterpretation of the interaction process for courses of this modality, face to the lack of a dialectical view of their participants. Another objective of this study was to incentivize new research so that the aspects not included in this investigation, for example, "face-to-faceness" and its implication for distance education interaction, and the mediation processes inherent to in-person and/or virtual meetings, may be disclosed and discussed. This would even more consolidate DL as an important mode of education at present. The constitution of the subject as a transforming actor of a society permeated by technological advances requires teachers, students and tutoring team to make the best use of the potential that technology offers.

This article does not exhaust the subject, or rather, further research is recommended to investigate and propose a training that favors "wholeness", i.e. the interaction based on the principles of communicative dialectic action and on the historical, cultural and social perspective, therefore, interactional and critical. This would certainly enable distance course students to construct their knowledge process.

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[7]   Microsoft Service Network - program that permits chat online via internet.

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