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BLENDED LEARNING ENVIRONMENTS: POSSIBILITIES AND CONSTRAINTS

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Abstract: This paper discusses the content of the interactions that emerged in an academic writing course for learners of English designed in a blended learning format. Drawing on Complexity Theories, it focuses on learners' interaction and collaboration in peer-review activities both in face-to-face and online asynchronous classes. Rather than directly comparing the learning environments this research focuses on their possibilities and constraints as well as on the value of combining them.

Keywords: Blended Learning; Computer Assisted Language Learning; Complexity Theory.

1. Introduction

The paper discusses the content of the interactions that emerged in an academic writing course for learners of English designed in a blended learning mode with face-to-face (FtF) and online classes. According to Heinze and Procter (2004), one of the main disadvantages of online learning is the lack of social interaction which is taken as given in conventional settings. According to them this creates a need for a compromise between the conventional FtF sessions and online learning which leads us towards a new approach to teaching and learning, the so called hybrid or blended learning.

Blended learning has arisen to combine different instructional modalities. The concept of blended learning, as explained by Graham (2006), refers to combining instructional modalities (or delivery media), combining instructional methods, and combining online and FtF instruction. According this author, the most common reason found in the literature to pick blended learning over other learning options is that it combines the best of both worlds.

In this paper, the term 'blended learning' will be used to refer to educational experiences which combine FtF classes with online classes, thus reducing the time spent inside a classroom and seeking to maximize the potentials of both environments. Garrison and Vaugham (2008, p. x) state that "blended learning is a coherent design approach that openly assesses and integrates the strengths of FtF and online learning to address worthwhile educational goals. In line with these studies, Martins (2008) makes a case for a Blended Language Learning (BLL) approach as an alternative to overcome the dualism and potentialize the benefits of each one in a way that goes beyond the capacities of each individual approach. One of the advantages of a BLL approach is that it affords the convenience and flexibility of the online learning and the personal contact and the interaction dynamics of FtF classes.

Considering these discussions, this paper aims to analyze the interaction dynamics in English as a foreign language writing course focusing on learners' interaction and collaboration during peer-review activities both in FtF and online asynchronous classes, supported by an ecosystemic perspective which incorporated principles from both Complexity Theory and ecological approaches to language teaching and learning.

2. CALL and non-CALL contexts

Comparative research has a long tradition in education and in language teaching in particular. However, few studies have tried to draw a comparison based on data between

CALL and traditional oral classroom; but rather, they assumed the traditional classroom as a frame of reference.

Traditionally, comparisons have been made between different teaching approaches and methods, between the acquisition of grammatical items, between traditional and distance learning etc. According to Levy (2001), comparative designs have been used since the earliest days of CALL research and are continuing over years, even though they have received several criticisms.

Levy suggests that there is a very strong desire to compare CALL and non-CALL contexts and that this recurring feature of CALL research may be due to a need to justify the expenses involved in their development with cheaper alternative of conventional classroom delivery (1997:13-28), and to prove unequivocally that CALL is superior to the traditional, non-CALL equivalent (2001:5).

Despite the number of criticisms that have been made to comparative research, Allum (2002) states that there is still a demand for comparative data, not aiming at proving that CALL is better, but at using the always limited and expensive teacher time in a more effective way. He suggests that further research could also be comparative and states that "pursuing such research in a 'real' as opposed to a purely experimental setting may allow others to feel confident that the results are relatively robust" (2002:161).

Considering that, as demonstrated by Russell (2001), many studies have found no significant difference between learning results in traditional classrooms and in other modalities, this paper does not try prove which learning environment produced better results but rather points to the need of changing the focus from the tension between FtF and online learning environments to search of alternatives of integration and complementarity between them.

This paper analyzes the interaction in traditional FtF classes and in online learning environments where the students did not share the same physical setting and time and, thus, several contextualization cues of the FtF interaction were not available. The research builds on previous findings on CALL and computed-mediated communication (CMC), and is anchored within theoretical frameworks from Complexity Theory and ecological approaches to language teaching and learning.

Although the relationship between FtF and computer-mediated interaction is considered, as well as the effects of technology on second language learning and use, the study does not aim to directly compare online and FtF learning environments but rather considers the BLL environments as a set of interrelated and interdependent components. It focuses on learners' interaction and collaboration in FtF and online asynchronous classes, aiming not at proving that one context is better than the other, but at understanding their possibilities for language teaching and learning.

3. Complexity and Applied Linguistics

Initially brought to the field of Applied Linguistics from isolated initiatives, complexity thinking has gradually established itself as a consistent epistemological basis for the understanding of contexts and events involved in teaching and language learning activities.

Recently, a growing number of papers, dissertations and books have sought to analyze the second language acquisition process, as well as the language learning classroom in general, in the light of chaos and complexity theories. Examples of these studies are Larsen-Freeman (1997, 2000, 2002, 2006), Paiva (2002, 2005, 2006), Parreiras (2005), Braga (2007), Martins (2008), Silva (2008); Larsen-Freeman and Cameron, 2008a, 2008b). These studies have highlighted the Complexity Theory's contributions to Applied Linguistics,

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demonstrating this theory's role as a system of interpretation for studies seeking a broader comprehension of the factors involved in the second language learning process. These events, as regards the process of second language learning, much like the universe as a whole, are complex in nature. In this same manner, Kramsch (2002), Leather and Van Dam (2003), Tudor (2001, 2003), Van Lier (1997, 2000, 2004) and Martins (2008), using the "ecology" metaphor, sought to re-think teaching and learning through complexity.

The ecology metaphor and basic notions of Complexity Theory are taken as a viewpoint to understand the interaction dynamics in a BLL community. One of the implications of this perspective, according to Larsen-Freeman, is that it discourages reductionist explanations of teaching events and language learning. In discussing issues relative to interlanguage, individual differences, and the effects of instruction, Larsen-Freeman (1997) contends that in non-linear systems, such as second language learning, the behavior of the whole emerges from the interactions of the parts. Thus, by studying the parts in isolation, one by one, we will only be discussing each part as opposed to the manner in which the parts interact.

4. Contextual issues

The ecological approach under which this study was conducted require research procedures that encompasses "the full complexity and interrelatedness of processes that combine to produce an environment" (Van Lier, 2004, p. 4). The ecological approach is a situated and contextualized way of doing research, since it studies the organisms in their relations with other organisms and with the environment. According to Van Lier, this approach is generally associated to longitudinal, descriptive and interpretative studies such as ethnography. In the same line Rodrigues Júnior and Paiva (2007) make a case for ethnography as an appropriate logic of investigation to the social research carried out on the perspective of Complexity Theory. According to Agar (2004), ethnography offers the investigations on complexity a form of social research compatible with their assumptions and objectives. He argues that if a researcher takes the perspective of complexity and aims to investigate and theorize the social world in any serious way, ethnography is the most appropriate kind of research to be conducted.

Larsen-Freeman and Cameron (2008b, p. 206) also argue that ethnography in many ways can serve the understanding of language as a complex dynamic system well, as "ethnographers seek emergent patterns in what they study". Another reason is that, "rather than aggregating and averaging across individuals as happens in experimental and quantitative studies", ethnography studies real people situates in their context and interactions in an "attempt to honor the profound wholeness and situatedness of social scenes and individuals-in-the-world" (Atkinson, 2002, p. 539).

Tsui (1995) points out four important characteristics of an ethnographic approach to observations. The first one is that it investigates an event or a situation from the participants' perception rather than from an outsider's interpretation of the event. The second is that it is empirical and naturalistic. Both participant and non-participant observations are used to acquire first-hand accounts of the event in natural settings. The third is that the investigation is holistic, that is, it tries to construct a description of the total event within its context in order to find out the complex interrelationships among the elements in the event. The forth is that it is eclectic, i.e., a variety of data collection techniques is used so that data collected in one way can be crosschecked with data collected in another way.

Thus the investigation was carried out in an ethnographic perspective with systematic observation of the course activities for the length of a school term.

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The analysis sought to enlighten the processes of interaction, participation and collaboration in the course, focusing on the collaborative text editing process in an online forum and in FtF seminars. Rather than directly comparing the learning environments, or attempting to discover which is more effective, this research focuses both on their possibilities and constraints as well as on the value of their combination.

The course was designed in a BLL format so as to give students the opportunity to interact both FtF and online. The FtF classes entailed reading and discussing theory as well as presenting seminars. The online classes were conducted in an electronic forum where texts produced by students were posted and in a discussion list via e-mail intended to resolve problems and doubts that would inevitably arise between one FtF encounter and another. For the sake of analysis, the data from this study's online and FtF experiences is presented separately. Enlightened by complexity theory, this analysis considers BLL environment as a unit, as all events occurring within both FtF and online is intimately interrelated.

5. Findings

Global events in the BLL course, as a complex system, are essentially influenced by the local interaction occurred in the microsystem level. The agents in a complex system, as stated by Johnson (2001), firstly interact with their neighbors in the local level. The interaction moves in both online and FtF environments take place in the local level and the agents form aggregations which act as meta-agents in the global level of the system. Thus, the analysis focuses on the interaction dynamics on the microsystemic level from which global patterns emerge.

This analysis draws on classroom studies such as Chaudron (1988), van Lier (1988), Tsui (1995) and Dalacorte (1999), and on CALL research such as Warschauer (1996), Levy (1997), Debski and Levy (1999), Chapelle (2001), Paiva (2001a,b), Warschauer and Kern (2000) and Fernández-García and Arbelaiz (2003). This approach is enlarged with the incorporation of an ecological perspective which aims to understand not only the internal dynamics of the learning environments but also their interrelationship with the ecosocial system to which these environments are ecologically linked.

The FtF classes took place in a traditional classroom without the use of computers involving activities such as reading texts, exercises, instructions for the tasks and peer-editing seminars. The online classes occurred in an e-mail list (for instructions and problem solving) and in an electronic forum (for text publishing and peer reviewing activity).

The first FtF peer-editing seminar was integrally transcribed and the speech turns were counted in order to analyze the interaction dynamics in these environments.

Results have shown that the teacher, Ana, is the one who talks the most, as described by previous studies on classroom interaction such as Chaudron (1988), van Lier (1988) and Tsui (1995). Although, as observed during the whole academic term, the teacher did not try to dominate deliberately the classroom talk, her number of turns (246) is considerable corresponding to 37,6% of the total of turns of the seminar (653).

Ana frequently tried to stimulate the students' participation with actions as: reminding the students the collaborative purpose of the seminars, asking questions to the class as a whole or asking for specific contributions to text reorganization during the peer-review seminars.

(01)
Ana: While you write yours, I'm going to read Angélica's ((looking at the board) some wrong(…) there are some mistakes
Angélica: Yes ((making some corrections on the board))
Ana: Yeah, we'll help you to correct. Chris, Bárbara ((looking at the students))

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Angélica: Eu queria falar they should ((with a strong accent))
Ana: Should? ((correcting the pronunciation))
Angélica: Teacher showing they're important
Ana: Showing they are important and ((looking at Angélica))

The teacher's presence, who is considered by the students as being more competent, contributes to the students' tendency to direct the process of text correction to her. Besides, she includes herself in this editing process as we can see by the use of expressions such as "I'm going to read" and "we'll help you to correct". In the first case she centers the process on herself and in the second she includes everybody including herself though. This fact itself would not be a problem, however, the students tended to consider the teacher not as a peer in the interaction but as a more capable individual in the interaction according to Vygotsky (1978) who could bring more significant contributions for their texts.

As it has been described in the literature (Chaudron, 1988, Van Lier, 1988, Tsui, 1995), the teacher is the one who frequently selects the next speaker, but it does not seem to be an attitude which aims to control the classroom discourse but an attempt to stimulate students to contribute to the colleagues' work. As we can see next, the students are the ones who frequently select the teacher as the next speaker. This emergent pattern in the FtF collaborative text review seminars indicates expectancy from the students that the teacher corrects their texts, although it has been established beforehand that the subject focus would be the collaborative review among the peers. In the online environment this need of getting the teacher's feedback is expressed through the emails sent to the list, not to the electronic forum where the peer editing occurred. During the online classes the management questions and the end of subject activity, two constitutive parts of class events, occurred in the discussion list and in the electronic forum respectively, while in the classroom this distinction did not exist.

(03)
Angélica: Ana, I found another book in the library on academic essays
Ana: Ah!
Angélica: And the name (…) I bring it for you
Ana: For us
Angélica: For us.
Bárbara: Ana, in my essay I used this
Ana: Thesis statement
Bárbara: But I put it in the fourth paragraph. I used the arguments to make it ãhm the main idea of the ãhm controlling idea. So it's not a thesis statement anymore I need another one in the first paragraph
Ana: No. Ok
Bárbara: But in the fourth paragraph
Ana: Uhm?
Bárbara: The fourth paragraph
Ana: The fourth paragraph
Bárbara: Because I gave my arguments on the subject (…)
Ana: Ah yes. You put your arguments in the fourth paragraph. It's too far from the thesis statement
Bábrara: Yeah. If I so I need another one in the first or second paragraph?
Ana: You may be right, but it can be useful for an argumentative essay but you may be right

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> *Bárbara*: Yes because I used an idea that it's the same. Computers in computers you aren't going to see body language and I can use this to start talking about the thesis of my essay
> *Ana*: Ah yes! Use it in the end. In the end too. It's ok.
> *Angélica*: Well the name is here. In the library (…)
> *Ana*: This is the one we use for integrated skills
> *Angélica*: It's more step by step
> *Ana*: Yeah. We start in one, go on in two and finish in three. It's the one. It's very good.

Angélica calls the teacher by her name and talks about another book on academic writing which she found, thus starting a dialogue. Then, Barbara does the same and starts to talk to the teacher about her text. Further, Angélica does not use the vocative as before but hands in the name of the book written on a paper to teacher and tells that she had found it in the library. This way, Angélica passes the speech turn to Ana, as it had occurred in two previous situations.

Using these or other strategies, the students selected the teacher as the next speaker many times, either to provide information or to make comments or even (more often) to ask for help in their texts. As the teacher was seen as a specialist, the students gave more value to her comments than to their peers and tried very often to get help or an assessment over what they have written. Even though it had been established that the seminar would be a collaborative review among peers and there would be a moment in which the teacher would correct individually and send through the email for each student, they generally wanted the teacher's contribution during the seminars.

Another question is that being the teacher the authority in the classroom, when nobody is selected or selects oneself as the next speaker, it is the teacher who generally takes the speech turn. Hence, it is natural that in the general accountancy of turns, the teacher has the biggest number.

We could, in a first approach, infer that the student Angélica (176 turns) is more talkative, followed by Chris (122 turns), Nathalie (68 turns) e Bárbara (41 turns). We could still interpret from the turns accountancy by topics that the text editing from the students Angélica (384 turns) and Chris (112 turns) were privileged in relation to Bárbara's text editing (33 turns) and Nathalie (75 turns). However, other questions need to be considered. First that Angélica is not the most talkative student in class, as we could notice along the academic term. Her high number of turns (57,2% of the sum of speech turns from the colleagues) is mainly due to the contingencies of this seminar, of her text review/editing process and her difficulties in her academic English writing. Thus, this difference in number of speech turns does not mean that one student systematically dominated the opportunities of speech in the seminar. Quite the contrary, it is something that emerged from the own dynamism of the system (the individual needs/difficulties and the own process of text peer editing).

Different from the FtF seminar, in the online environments (forum and discussion list), the number of messages in the same week was low. While in the FtF seminar 653 speech turns were counted, in both electronic environments only 51 messages were counted, being 16 messages sent to the discussion list and 35 posted in the forum. This low number of counted messages in the online environments this week, however, does not necessarily mean that these environments had been empty. Firstly, the interaction nature in each one of these contexts needs to be considered. In the classroom, as it is a FtF interaction, the interaction presents a dynamism in which the speakers alternate constantly following to a certain extent, the

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organization of speech turn taking described by Sacks, Schegloff e Jefferson (1974). In the discussion and the forum, as they are asynchronous environments, a speaker does not interrupt the other what may contribute to the reduction of the message numbers. However, as the asynchronous environments enable a text elaboration before its posting, each message sent to these environments tend to be longer and more structured than a speech turn in the FtF interaction.

As the participation in the list was not compulsory, there was little interaction between the students in this environment. The majority of the messages in the list had been sent by the teacher, for whom the majority of messages sent by the students also converged. Her messages in general were about information, answers to questionings or comments about the texts produced by the students. The messages sent by the students on the other hand, involved questionings and other requests.

The interactions occurred in this environment do not fit in the classroom discourse patterns traditionally found in the literature. As it had been stated before, the teacher did not control the participation in the list, not even established obligation over the participants to send any email during the academic term. However, all the participants registered in the list were officially authorized and approved by the teacher, by the institution and by the group and so they could express themselves at any moment. This freedom of participating or not, adding to the fact that the end of list activity (subject management) was also carried on in certain moments of the FtF class gave the option to some students not to participate or to participate little from the list.

Although the teacher did not control the emails sent to the list, she is the one who takes part in the events occurred in this environment, something which has been observed all through the academic term. This also happened in the FtF classes, previously discussed. Thus, this tendency from the students to direct their speech to the teacher may be because of their individual characteristics and their concept of the teacher's role than to the specificity of the online and FtF environments.

In this environment, the classroom discourse pattern is not established which according to authors such as Chaudron (1988), van Lier (1988), Tsui (1995), Cook (1986), McCarthy (1991) and Dalacorte (1999), have demonstrated to be essentially teacher centered who generally controls the dynamics in the speech turn taking. In general, each participant takes his/her turn freely because there is not the limit of 'one speaker at a time' which according to Sacks, Schegloff and Jefferson (1974), characterizes the organization of the speech turn taking.

The messages posted in the forum are very alike in its structure to the emails sent to the discussion list. In her invitation to the task 5 for example, the teacher starts her message with the vocative "Girls" and closes with "Yours", followed by her name. This structure was also common in the discussion list. It was also common, for example, the teacher sending emails to the list beginning with the same vocative "Girls" and closing equally with "Yours", followed by her name. Not only in the discussion list but also in the electronic forum, it was the standard form of opening and closing of the teacher's messages, when they were addressed to the group and not to one individual in special.

This remarkable resemblance between the forum messages and the emails from the discussion list suggest that the structure of the messages was not solely determined by the characteristics of the electronic media. We need to consider, besides the specificity of each one of these media, the attributed functions to each one of these in this context under investigation.

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The texts posted in the forum by the students present characteristics from the academic texts and not from the online interaction because they were produced offline and then posted in the forum. Besides, the focus of the subject was the text production in the academic genre. The subject content aimed "the development of the ability of writing academic texts."

The message structure posted by the students in the forum is very similar to the typical structure of the emails sent to the list, which is evidence that the different electronic media were not the essential determinants to the prevalent linguistic structures in these environments. Besides the linguistic structure similarity in the posted messages in each one of these environments, this structure is also very similar to messages, notes and informal letters commonly written in paper. That is, according to Paiva (2004), an email characteristic.

Another question is that the low number of messages found in the online environments is influenced by the own pedagogical design of the subject that foresaw discussions in these environments as the ones in the FtF seminars. This is evident when we compare the interactions in these online environments to those presented in the studies of Paiva and Rodrigues Júnior (2004, 2007), Martins (2004, 2005, 2006), Parreiras (2005) and Braga (2007). In these studies, although the used technological tools were the same (discussion lists in some cases and online forum in others), the number of posted messages in the online environments is remarkable. In the subject "English: Text production", the discussion list was aimed at notes, messages, doubts and other questions on the subject management. In spite of the fact that the electronic forum was more aimed at the text revision among the peers, it did not foresee the discussion among the participants. Each student should post only her text and its revision of the colleagues' texts. Besides, the fact that this context involves the same subject, the same teacher and the same students in online and FtF classes, many of the social questions reported by Martins, Parreiras and Braga were not significant either in the discussion list or in the electronic forum. Considering the FtF interaction's closer interaction and the fact that the online environments used did not allow the real time interaction, the social-affective demonstrations occurred much more in the classroom and in the corridors than in the online environments.

As this learning community may be treated as a complex class ecosystem, parts of the events occur in a different way than it was planned. In one moment of the course, for example, the student Angélica sends a task to the list that should have been posted in the forum. So the teacher needs to interfere telling the student to post her text in the forum where the colleagues would do the peer editing. Several other questions that were not predicted make the system reorganize itself as we can observe in the following excerpts.

> **(04)**
> **From:** Amanda <amanda@...>
> **Date:** Sat Sep 25, 2004 2:22pm
> **Subject:** voy
> Hi, eveybody!
> I'm writing just to say that the page www.voy.com/184050 is not working today, so it is impossible to correct my friends's composition. I hope tomorow everything is ok.
> Bye,
> Amanda.

Sometimes along the academic term, the forum was not available postponing or transferring the text editing activities to the discussion list. This indicates the system dynamism that because one of the technological tools was not available, it organizes itself and

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uses another that initially did not have this function. Besides the system auto-organization in relation to technology, there is also an auto-organization in relation to the tasks.

The editing task organization between the peers also goes through reorganizations along the change of events in this ecosystem. We can see one of these changes in the excerpt below, caused by one of the two students giving up, discontinuing the groups established in the beginning of the academic term for the text peer editing activity:

> **(05)**
> **From:** Ana <ana@...>
> **Date:** Sun Oct 24, 2004 10:52pm
> **Subject:** Task 4
> Hello, girls,
> I'd like to suggest one more chance to the dynamics of the on line work. As you are only six students now, and two editings is not at all enough, I'd like to propose that all of you give feedback to all your classmates. This way we wouldn't have two groups any longer, but one only group and each of you will have to revise five texts. I know it means more work, but it may also mean better texts, right? So, let's begin doing that right now for task 4, all right?
> See you,
> Ana

The group was initially divided into two for the peer editing activity in the forum. As these two students gave up, the end of this division was necessary and from this moment on, all the students had to have the task of reading and editing all other colleagues' texts. This change illustrates the auto-organization and adaptation of the community before contextual modifications enabling its coherence or in terms of Holland (1995, 2006), assuring its survival.

During the FtF classes, in the first moments of the subject before the beginning of the collaborative text peer editing seminars, the class events were more centered on the teacher. This first part of the subject involved the text reading about academic writing, solving and correcting exercises in the classroom, the teacher explained and guided the tasks that the students should do and in certain moments, the first versions on the student's texts were corrected by the teacher. In general, this correction was done outside the classroom after the peer editing in the online forum. However, on the task 1, the teacher asked the students to reorganize their texts after the peer editing in the forum, then print and take them to the classroom. The students took to the FtF class after task 1 in the forum, their printed texts which were corrected essentially by the teacher, although she showed that this should be done by the class as shown below:

> **(06)**
> *Clara*: Ana, first I'd like you to take a look at my outline.
> *Ana*: ((looking at the class)) So let's have a look at Clara's outline.

The teacher Ana, after one student's request to analyze her text, turns to the group as a whole and suggests that this should be done. Her action suggests a purpose that Clara's text analysis should be done by the group. However, with the use of the expression "let's" the teacher includes herself in this process and shares this task with the students. We can see a dialogue below between the teacher and the student about her text and not a collective peer

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editing as suggested by the teacher in the previous excerpt. In the following excerpt we have another part of this dialogue between the teacher and the student:

> **(07)**
> *Clara*: But I have to because do not have a symmetry.
> *Ana*: Uhum. And they don't have a symmetry that's why it's always good to have parallel structures because it's this, this and that.
> *Clara*: But not (…) I don't know how to include this in my thesis statement. How can I make this?

In this dialogue, in which we could notice some time with no participation from the other students in class, the student asks the teacher to correct and guide her on the reorganization of her text. As the teacher included herself in the process of peer editing and the students saw her as a more competent participant, they frequently sought the support they needed on her:

> **(08)**
> *Chris*: Ana, now we after that part I have an idea about how to rearrange my essay
> *Ana*: Ok.
> *Chris*: again uhm the paper you my essay you read was (...). Now when I'm supposed to reorganize this essay?

Through the use of the vocative as in the case above, or the use of glances and gestures addressed to the teacher, the students generally tried to direct the process of correction to her. In these moments, the classes consisted on a series of dialogues between the teacher and the student whose text was being corrected which was structured in a similar way to the conferences of text correction between a teacher and a student described by Figueiredo (2004). In the case of the subject "English: Text production", however, this conference happened with an audience (other students in class) to whom the teacher addressed many times and was sometimes called to participate. Yet, stated by Figueiredo quoting Walker (1992), "The teacher's dominance is not a problem if the students' real needs are the focus of the interaction." (2004, p. 128).

This teacher's participation was reconfigured in the text peer editing seminars, in which the class actually participated from the students' text editing. In this peer editing process she also included herself as a participant but as affirmed in the interview, she tried to stimulate the students' participation. She affirms that in the classroom she tried to stimulate and direct the students' participation while the forum interaction would be the students' moment in which she did not want to interfere. In this seminar, the students expect the teacher to correct or approve their texts due to many reasons. One is the fact that the teacher puts herself as a participant in the FtF seminar, adding to the students' anxiety to have their texts corrected and also the beliefs and conceptions social-historically constructed over the teachers' and students' role in the classroom. Thus, the teacher's positioning as a participant in the peer editing process and even her immediate presence has implications to the dynamics occurred in this context.

In the electronic forum, the teacher did not include herself as a participant in the text peer editing process. She only posted the instructions in each task and let this process be done solely by the students. This was already part of the instruction design of the subject because as reported by the teacher in the interview, this would be a moment only for the students. This

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fact that the teacher did not include herself as a participant and her absence (virtual) in the electronic environment during the peer editing process has certainly significant implications.

Considering that the teacher and the students are the same both in the FtF and the online environments, the teacher has the same conceptions and expectancies that is, the students should collaborate with each other. And on the other hand, the students also have the same expectancies that the teacher should correct their texts or approve their corrections. A remarkable difference is that the synchronicity in the classroom, the physical presence of the participants in the same environment and the conversational dynamics that happen enable the teacher's interventions and the students' feedback requests to occur in the course of the text peer editing process. In the online interactions there was not a synchronic interaction tool through which the students could make contact with the teacher in real time. Besides, there was not a predetermined time or an established day to do the writing and the text editing. Thus, when the students needed any help or any doubt solved they had to send an email to the list or straight to the teacher and wait for her feedback. Then, in the online classes, the teacher could be away more easily from the text editing process and let it really happen between the peers.

However, the teacher did not totally relinquish control over the online classes. In the forum she posted specific instructions in the beginning of each task over the way it should be performed. Then, the teacher was present in another way in the tasks throughout all the stages of the forum. Moreover, there was also the discussion list that was characterized essentially as an activity management space of the online activities from the teacher. In this space, she gave instructions, corrected distortions, gave feedback on the tasks and determined the deadlines among others.

Hence, even in the online classes the teacher maintained certain control over the events occurred in this environment because the subject pedagogical design and the teacher's presence in the list imply a certain kind of control. Nevertheless, control is always partial because in this ecology of language learning as a complex system, many events are not totally predictable.

An essential condition of complexity in the classroom, according to Davis and Simmt (2003), is the decentralized control. Actually, if all the movements of the system were rigidly controlled, there would not be space for auto-organization and emergence. However, studies over complexity show that this absolute control is impossible in complex systems. As stated by Johnson (2001), decentralized control is a characteristic of any emergent system. According to Sumara and Davis (2006, p. 48), "a key element in effective teaching is not maintaining control or relinquishing control but, rather, in dispersing or distributing control across the network of relationships in the classroom". They emphasize that decentralized control in the education context should not be interpreted as neither condemning the teacher centered classroom nor a defense of the student centered class, because under certain circumstances, none of these approaches may support the complexity and in other circumstances both approaches play this role.

The subject "English: text production" decentralization movements occur, beginning from the FtF classes where the class events were more directed by the teacher, going through more decentralization in the FtF seminars and eventually, to the process of collaborative peer review in the online forum, where the teacher positions herself again and offers in this design opportunities for the students to interact without her direct intervention. Even in the initial moments of the FtF classes, the teacher did not control all the events occurred in the community dynamics. Actually, as suggested by Davis e Simmt (2003) about the classroom

and also Johnson (2001) who states about several emergent systems, decentralized control is typical of complex systems.

Johnson (2001), Davis e Simmt (2003), Bowsfield (2004) e Davis e Sumara (2006) emphasize that emergence cannot be caused, once it is a spontaneous emergence phenomena, but it can be caused according to the restrictions and possibilities established in the core of the system. Thus, in the education context, emergent phenomena in a learning community can be closely related to its own structure of the instructional design that at the same time, establishes restrictions and possibilities inside the system.

In spite of the fact that this community do not present a leadership distribution pattern as the one reported in the empirical studies of Braga (2007), the control decentralization observed in the interactions in the seminar and mainly in the online environment favors the emergence of common patterns in the adaptive complex systems. Dynamics can be observed when the community before contextual alterations, changes the state organizing itself, enabling the emergence of a new order that guarantees that the system continues working even before adversities. Thus, these emergence and auto-organization patterns reinforce that the system is evolving and that the teacher's repositioning together with the instructional design (seminar and forum) seem to grant opportunities for the system to evolve both in the micro and the macro levels if we consider the emergence of these patterns.

6. Concluding remarks

Both online and FtF learning environments presented characteristics which are commonly found in adaptive complex systems. These characteristics can be observed in the corpus investigated in this paper. The results presented herein demonstrate that the communities are in a constant movement of state, *i.e.* dynamicity, which can be illustrated through the events of the aforementioned divergence and convergence.

Emergence can be considered the most preponderant aspect in the investigated corpus. Distinct pattern of leadership arise within the studied contexts. Leadership centered around the teacher appears in FtF classes. Likewise, as reported in a number of studies regarding classroom interaction (van Lier, 1988; Tsui, 1995; Chaudron, 1988; Dalacorte, 1999), the classroom interactive dynamics are, essentially, centered on the teacher who, in general, controls the turn-taking dynamics.

In online activities, there arises a more de-centralized leadership. In this context, the presence and coordination of the activities by the teacher occurs, but not at the same intensity as in FtF classes. These findings are in accordance with studies that indicate a trend toward a greater participation of learners in online classes (Sullivan and Pratt, 1996; Warschauer, 1996; Paiva, 1999. Fernández-García and Arbelaiz, 2003). In the online community where there was no direct intervention from the teacher, a pattern of distributed leadership.

Another emerging aspect is the fact that the social relations are more linguistically apparent in online interactions than in FtF interactions. In FtF interactions, diverse verbal paths, such as looks, facial expressions, and gestures, play key roles in marking social presence or "immediacy", as defined by Mehrabian (1969). These results are aligned with previous studies (Davis and Thiede, 2000; Martins, 2005, 2006) which indicate that, due to restrictions in contextualization (Gumperz, 1982), common in FtF interactions, expressions of emotion and politeness tend to appear more linguistically marked.

The results point out to the value of BLL instructional designs that aim at the convergence of FtF and online modes in order to explore the potentialities of each mode. BLL courses have the potential of combining these traditionally separated teaching modalities integrating the proprieties and possibilities of each one. The combination of these modalities

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overcomes the dualism that seems to suggest a need to chose between conventional FtF and online modes and enhance the potential benefits in a way that is beyond the capacities of each one individually.

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