

Review

Collaborative writing by means of digital tools: resignifying textual production in the School context

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Abstract

The objective of this paper is to analyze the process of construction of collaborative writing practices of a group of students of a Brazilian secondary public school, by means of the use of two Internet tools: instant messaging and e-mail. As for the type of research, it is a typical qualitative investigation, which is characterized, more specifically, as a research action, whose intention is not only restricted to understand or describe the world of practice, but, above of all, to try to change it. We base our theoretical discussion upon the digital revolution occurred with the Web 2.0 advent, in which we show how changes inherent to the passage from Web 1.0 to Web 2.0 reflected in the creation processes on internet, and upon the theoretical-analytical devices, proposed by Lowry et al. (2004), which are based upon: collaborative writing activities, collaborative writing strategies, collaborative writing roles and collaborative writing modes.

Keywords: Education, collaborative writing, Web 2.0, digital tools, school.

INTRODUCTION

New information and communication technologies have been enabling new digital writing practices very different from chirographic and typographic practices of pre-internet era. It has happened, above of all, after the advent of web 2.0, in which new mechanisms have been created, enabling new technical and socio-cultural conditions for amplifying communicative practices in the digital world. Now people do not only receive, but also publish information. This then deconstructs the own traditional author and reader categories.

However, despite all such writing practices changes, which bring, for one hand, social, cultural and technological transformations, schools, on the other hand, seem to be one of the few institutions which have remained resistant to such changes, because, in general, they deal with writing practices which do not reflect such changes. Therefore, it is each time more necessary that the school institution rethinks its functionality, re-evaluates its strategies and reinvents its practices in order to try to answer the multifaceted exigencies of this new digital era (Belintame, 2006), which is organized more dynamically and it is more interrelated with the use of information and communication technologies that emerge in the current scenario of the globalized world.

Thus, in an attempt to deal with the relationship between internet and writing in the school context, this papers aims to investigate the construction of collaborative writing practices among a group of secondary school students, through the use of some internet tools, so as to discuss and propose a possible alternative to understand how text production can be worked at school. To do so, this study is divided as follows: first, it will be carried out a reflection about internet and web 2.0, by showing how this second generation of web has brought several changes, mainly with regards to the author-reader relationship; second, it is put in discussion the concept of collaborative writing (CW) and the way it can be constructed as a writing process; after that, it is established a relationship between CW and two internet tools in particular: messaging and e-mail; then it is carried out the empirical data analysis; finally, there is a conclusion about the paper as a whole.

Internet and web

Internet, by means of its simultaneous connection, has brought a totally new relationship for the concepts of

context, space and time. In fact, humanity has experienced a new time perception that goes much beyond the writing linearity; it has become segments of an immense net on which we move. People live each time more a rhythm of big speed in which there is not any horizon, nor a limit in the end of line. On the contrary, there is only a fragmented time in a series of uninterrupted presents which do not superpose one another, as pages of a book; yet they exist simultaneously with multiple intensities that vary according to a given moment.

Levy (1999) presents cyberspace as a big net worldwide interconnected by means of a “universal” communicative process, but without “totality”. This way of communication has enabled to the surfers of such ‘big network’ a democratic participation in an interactive model made for all. It then consolidates the idea of a ‘global village’.

However, such democratic participation has only become possible with the advent of web 2.0. The term ‘web 2.0’, used to designate the second generation of World Wide Web, was used by O’Reilly (2005) (The term “web 2.0” was first used in 1999 by DiNucci in his paper “Fragmented Future”. However, at that time, the author saw the second generation of web as something for the future that was beginning to appear, an “embryo” that was starting develop, and not as something was in fact taking place) to trace the origins of the distinction between Web 1.0 and Web 2.0 and to point out a series of internet tools and reasons to understand several collaborative experiences as another moment of web. According to the author, web 2.0 has provided a huge change: from static websites which only supply information, we have experienced the development of dynamic communities inserted in a constant interaction between editor, author and audience.

For a better comprehension of what web 2.0 represents nowadays, it is needed to report to the previous generation of web (web 1.0) on which people used to surf with the exclusive intention to look for information. It was basically a unilateral experience, similar to a visit to a library to find a book. On web 1.0, users were not seen as controllers of their own data. Information obtained on the web was, in general, the result of the work of professional programmers who had the necessary knowledge to create web pages to publish on the web. Therefore, the logics of the first generation of the web was ‘use’, not ‘participation’; ‘reception’ and ‘consumerism’, not ‘interactivity’ and ‘agency’.

Differently from what took place on web 1.0, with the consolidation and the accelerated growing of internet in the last years, due to the advent of web 2.0, new mechanisms have been created, enabling new technical and socio-cultural conditions for amplification of communicative practices on cyberspace. On this new web, there is a participation architecture which includes functionalities which enable people not only to receive

data, but also to publish information. Hence, even though users do not have any technical knowledge, they can create their spaces on the web. For instance, it is possible to cite blogs, forums, and social networks, such as Facebook, Twitter and Youtube, which have technologies that stimulate users to produce their own contents, in addition to enable them to become visible on the web by means of such social networks.

As on web 2.0 users do not only search for finding information, they also create and publish contents, there has been a reconfiguration in the current broadcasting system, which has passed from the ‘one-to-many’ format to the ‘many-to-many one. In other words, “new information technologies are not simply tools to be applied, but processes to be developed. Users and creators can become the same thing” (Castells, 2005:69).

An particularly interesting example of the web 2.0 effects is Wikipedia. One of the ten most visited websites in the world, Wikipedia is known as an online encyclopedia with which any user can collaborate. In fact, it is a good example of how websites now encourage users to submit their own material (in this case, texts) to the web. It consequently shows that if web 1.0 was a means of reading, web 2.0 has become a means of reading and writing.

Indeed, such (re)configurations are accompanied by the emergence of a new kind of mindset which create, according to Knobel and Lankshear (2006:18), not only a new technical stuff, but a new ethos stuff, which is built on “distributed expertise and decenters authorship. In terms of ethos it celebrates inclusion (everyone in), mass participation, distributed expertise, valid and rewardable roles for all who pitch in. It reaches out to all the web, regardless of distinction”. It means that practices that value participation instead of isolated work, shared expertise instead of centralized expertise, collective intelligence instead of individual intelligence enable new literacies.

In addition to such free space of web 2.0, which enables any person to publish anything with no need to suffer any kind of organizational, institutional or editorial sanction, there is another issue that is much older the appearance of new information and communication technologies, but it has taken a new meaning with the internet advent. We are referring to the culture of narcissism, which amplifies ways of celebration of the ‘Self’ on the web. Each time more, relationship websites, such as Facebook, Orkut, My Space, Twitter, Youtube etc. have become a locus of self promotion, in which millions of adolescents (and also adults) in the whole world show their ‘digital profiles’ to other people in a tentative to become celebrities, or at least more popular. Web 2.0 has democratized ‘fame’ on internet with the culture of ‘broadcasting yourself’ through thousands of videos that are daily posted on Youtube by people who wish to become famous or at least recognized. If internet potentiates these two issues – the possibility to become

an 'author' and to be known by a lot of people – and people, specially adolescents feel so attracted to such issues – so why do not explore them in the school context?

In this sense, this paper aims to explore these two issues, by analyzing the CW of a group of students of a public school during the production of texts to be published in a digital school newspaper (see section 4). Such newspaper was created on a website, then any person may have access to, read the students' articles and make comments about them. Therefore, the students would be both able to become authors (writers and editors of a newspaper) and to be known by means of the articles published. Indeed, it means that the exploration of web 2.0 can give important contributions to the creation of collective and distributed work, affective changes and joint social construction of knowledge, namely, it can create, as Knobel and Lankshear (2006) state, a 'new ethos stuff' for CW.

Cw: A Look at text Production as a Process

Lowry et al (2004) point out that CW consists of a social practice which has become each time stronger, because, while the globalization process increases the need for development of collaborative activities, internet, with all its technological resources, enables such collaborative work. It is not by chance that researchers from different knowledge areas, above of all from technological areas (Lowry et al. (2004) point out that researches about CW in technological areas have already taken place for some time. However, only recently Human and Social Sciences have been interested by such issue) (business, marketing, engineering, technology sciences, computer technologies etc.), most of times working through interdisciplinary perspectives, have focused each time more on CW.

According to Collins (1993), collaboration is a process of shared production: two or more subjects, with complementary abilities, interact with one another to create a shared knowledge that none of them had previously or could obtain individually. In this case, collaboration would create a shared meaning about a process, a product or an event. It means that, when working together, people can potentially produce better results than individually. In a collective writing work, it can happen complementarity of capacities, of knowledge, of individual endeavor, and of opinions, in addition to a better capacity to generate more viable alternatives for problems solution.

Consequently, it is possible to say the CW can involve juxtaposition of individual works, typical of cooperative works, but with the complicity among group participants, who establish, for such individual works, common objectives that fulfill the group needs. In this sense, a collaborative activity, according to Allen et al. (1997),

consists of a set of group interactions by means of which discoveries are shared, mutual comprehension is searched, senses attributed to works are negotiated, as well as new knowledge is constructed.

Based upon such idea of collective work, it is possible to state that CW is a social and active enterprise which has two interrelated impulsion forces: a group, as agent of individual support, and participants whose involvement to collaborate rest on their interest in sharing with the group the accomplishment of tasks. Therefore, we can say that, due to its social basis, collaboration includes other concepts such as socialization and trust, identity and group cohesion, motivation and active involvement in participation.

In this perspective, CW is intrinsically related to the dynamics of socio-cultural practices and, as these practices evolve and consolidate, they raise an environment that can promote, indeed, interaction among people.

In a tentative to use an applied terminology to the interdisciplinary field, Lowry et al. (2004), based upon the work of Horton et al. (1991), offer a taxonomy for CW, whose intention is to describe a CW process through: 1) CW activities; 2) CW strategies; 3) CW roles; and 4) CW modes. As the objective of this section is exactly to bring the authors' CW terms and concepts into the discussion, without problematizing them, we used tables with the CW terms and their corresponding concepts in order to make them easier to be understood (For a detailed discussion and problematization of the terms and concepts proposed by Lowry et al. (2004), see the doctoral dissertation entitled "Collaborative Writing Practices by means of internet tools: resignifying textual production at school", by Pinheiro (2011). <http://www.bibliotecadigital.unicamp.br/>).

As for the CW activities, where the whole CW process takes place, Lowry et al. (2004) point out that there are key activities involved during the actual production of a group's document. They are prewriting activities, task execution activities and postwriting activities. These activities can be divided into some key activities of CW according to the table 1 below carried out by Lowry et al. (2004:82):

Regarding the CW strategies, Lowry et al. (2004:74) define them as a "team's overall approach for coordinating the writing of a collaborative document". The authors then, based on Ede and Lunsford (1990), point out the strategies described according to the table 2 below:

In respect the CW roles, Lowry et al. (2004:85) point out that several roles are used in CW, and a given participant's role may change over time, depending on the activity in which CW group is engaged. According to the authors, the common roles include writer, editor, reviewer, scribe, and facilitator, as summarized in Table 3 below. The term roles is used because descriptive role definitions often convey the corresponding task respon-

Table 1. The Common Activities of CW

Brainstorming	Developing new ideas for a paper draft.
Converging on brainstorming	Deciding what to do with the brainstormed ideas as a group.
Outlining	Creating a high-level direction in which the document will be going, including major sections and subsections.
Drafting	Writing the initial incomplete text of a document (this is typically synonymous with the term writing, but the term drafting is used to convey incompleteness in the writing). This is also synonymous with composing.
Reviewing	Having a participant or an editor read and annotate document draft sections for content, grammar, and style improvements.
Revising	Responding to review comments by making changes in the draft that reflect the review comments. Revising is used over editing to distinguish this activity more clearly from copyediting and from the editorial process of reviewing
Copyediting	The process of making final changes that are universally administered to a document to make a document more consistent (such as copy edits, grammar, logic), usually made by one person charged with this responsibility, which is a less descriptive term.

Table 2. CW Strategies

Group single-author	Occurs when one person is directed to write for an entire team. This strategy is commonly used when consensus on the written results is not strongly important to group members because the CW task is generally simple. However, group single-author writing is still a form of CW because it involves a team that worked toward coordinated consensus that is reflected in a document that is written by one of the team members
Sequential writing	Where one person writes at a given time; each writer completes his or her task and then passes it on to the next person, who becomes the next single writer. The benefits of sequential writing include simplified organization and improved coordination for distributed work.
Parallel writing	Occurs when a team divides CW work into discrete units and works in parallel. This strategy is also referred to as a separate writer strategy or a partitioned writing strategy. We chose the term parallel writing because it conveys work in parallel by multiple writers, and such work does not necessarily have to be partitioned into separate sections.
Reactive writing	A strategy that occurs when writers create a document in real time, reacting and adjusting to each other's changes and additions without significant preplanning and explicit coordination. We chose the term reactive writing because reaction is the only common thread that occurs in this form of writing, which may involve consensus or dispute, reflection, or off-the-cuff contributions.

Table 3. CW Roles

Writer	A person who is responsible for writing a portion of the content in a collaborative writing document.
Editor	A person who has responsibility and ownership for the overall content production of the writers, who can make both content and style changes to a shared document.
Reviewer	A person who is internal or external to a collaborative writing team who provides specific content feedback but does not have responsibility to invoke the content changes.
Team leader	A person who is part of a collaborative writing team, who may fully participate in authorship and reviewing activities, but also leads the team through appropriate processes, planning, rewarding, and motivating.
Facilitator	A person who is external to the collaborative writing team who leads a team through appropriate processes and does not give content-related feedback (Adkins, Reinig, Kruse, and Mittleman, 1999).

sibilities and because collaborative writers can plan multiple, shifting roles over time.

Lastly, Lowry et al. (2004:87) deal with CW work modes. This CW category can be summarized as decisions

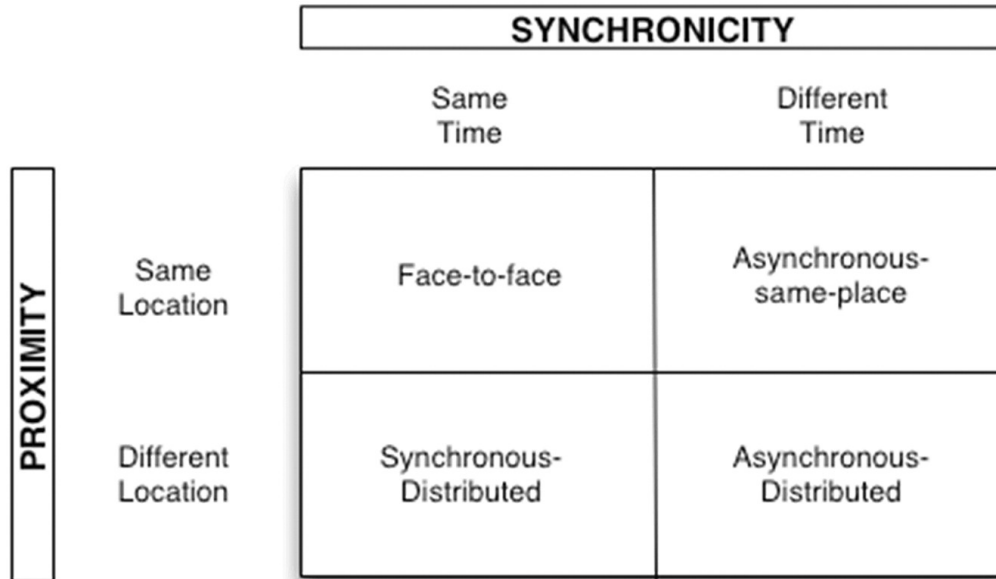


Figure 1. CW Work Modes

Table 4. Four Manifestations of Group Awareness

Informal awareness	Knowing where participants of a team are working, whether this is in the same location or distributed locations.
Group-structural awareness	Knowing how a group is structured formally and informally in terms of roles, responsibilities, status, process, and positions on issues.
Social awareness	Knowing the degree to which participants are interested, paying attention, their level of commitment, and their emotional state.
Workspace awareness	Knowing what other participants are doing in the shared electronic workspace.

between the degree of proximity (how physically close a group is) and the degree of synchronicity (when a group writes). Consistent with other collaborative work, we term the combination of these decisions as a group's work mode, as depicted in figure 1 above:

According to the authors, the four work modes of CW directly influence the level of group awareness experienced in a group. Group awareness in CW differs based on the work mode employed because the underlying differences in synchronicity and proximity affect directly how much group members can understand what it is occurring. For example, asynchronous-distributed group members do not have face-to-face conversations and typically do not see the work of others; thus, asynchronous-distributed group work typically has less group awareness than face-to-face work. Group awareness is also important in CW because awareness influences coordination, and awareness and coordination are required for successful outcomes. Group awareness can be manifested in the combination of four different forms, all of which will impact CW, as listed in Table 4 above, taken from Lowry et al. (2004:90).

Indeed, when thinking about the school context, we are

trying to create more efficient artifacts, spaces and activities that enable collective practices of meaning construction for such context. Hence, it is possible to say that two internet tools, despite not being regarded properly as specific tools for working CW, can be very suitable to deal with CW in the school context: e-mail and instant messaging (IM). But how such tools could become, in fact, useful to promote CW practices in the school context?

To answer such question, it is necessary to propose a pedagogical use for the internet tools as mediator instruments in the learning and teaching process, more specifically in the CW process. In this sense, it is possible to say that, from a technical point of view, e-mail and IM present technological resources that can have an important role in such process.

First of all, we can state that e-mail and IM are reconfigurable and dynamic tools. It is easy, for example, to insert and move texts, graphics, figures, photos and videos any time. This can help a lot in the collective suggestions and/ or corrections of texts.

Another important issue that calls our attention is the fact that, as well as face-to-face interactions, IM, for example,

presents a kind of synchronous communication that not only allows an simultaneous interaction, but also that such interaction takes place among several people at the same time. However, IM presents an advantage in relation to tradition face-to-face interaction: in general, it enables a more symmetric turn-taking distribution, occurring, therefore, less interruptions and more equity in the interactants' decision-taking. This is particularly interesting, above of all, for shier people and for those who, somehow, do not feel at ease to get involved in a traditional group discussion (face-to-face type) for accomplishment of any work.

Furthermore, it is possible to observe a relative time and space independence in communication, what permits users to write and receive messages any time during the day from any computer connected to the internet. It is very relevant for groups whose members, for example, live in distant places from one another.

Although it is known that nowadays there are specific internet tools which can support CW, because they have all the technical resources necessary – even more sophisticated than e-mail and IM (There are several softwares which enable, somehow, CW. Among the most known ones are: Collaboratus, o Grove, o Sasse, o Slashdot, o Quilt, o Alliance e o Equitext) –, most of them are practically exclusive of professional working contexts. In this sense, from a social point of view, thinking specifically about the interests of those who will make use of the internet tools (students and teachers), we can say that, first of all, e-mail and IM are nowadays some of the most popular internet tools in the world and daily used by people in general, specially adolescents, even though they are used with other purposes. Consequently, they can become very useful in the CW process, since most people already know how to use them.

Such explanation presupposes that, as e-mail and IM are so much used by a very large number of people all over the world, it would not be required an extensive training of students and teachers, even for the purpose of collaborative text production.

We can still point out that both e-mail and IM are softwares which can be obtained (downloaded) on internet without any cost. Besides, schools would not need to have a special infrastructure to deal with such tools; it would only be necessary a computer lab equipped with some computers connected to the internet, what a lot of Brazilian public schools already have (According to the census carried out in 2012, more than half of Brazilian public schools already are connected to internet.

Available on: <http://www.inclusaodigital.gov.br/noticia/banda-larga-em-escolas-publicas-reduz-exclusao-digital>. Access on: 15/01/2011).

Therefore, taking into consideration the theoretical discussion carried out so far, in the next section we will present the contextualization and the data analysis of such study.

Contextualization and data analysis: An example of CW in the school Context.

In this section, we contextualize this study and develop a data analysis that can comprise the CW process of some activities of the students involved in this research. Specifically, it is a brief part of a doctoral dissertation, in which it was carried out a research based upon analyses of a corpus generated from a teaching project of a digital school newspaper that was developed in a State school located in the municipality of Campinas, SP, between August and December, 2008th, with a group of nineteen high school students from fifteen to seventeen years old. The teaching project was basically consisted of the students' collaborative work during the production process of the online newspaper articles by means of the use of two digital internet tools: IM and e-mail.

We created a website for the newspaper and we had a weekly meeting in one of the classrooms where we discussed about the students' work along the previous week and the agenda of issues and news to be addressed in the online newspaper in the following week. The students were then included in the newspaper editorial, which was weekly updated. To carry out the several activities necessary for the newspaper production, the students were grouped as follows:

- Two students were responsible for the website creation and maintenance (text diagramming and formatting, webpage layout, colors, insertion of contents – texts, images, graphs, videos – insertion of links to access other websites etc.);
- A larger group (twelve students) was in charge of the textual production properly said. Such group was, for its turn, divided into four subgroups (with three students), each one with its respective leader;
- Another group (with five students, with only one leader) was responsible not only for written text reviews, but also for other multimodal resources (videos, images, graphs, photos etc.) to be exposed in the digital newspaper.

Based on such teaching project, it was possible to collect the empirical data registered from online meetings by means of IM and e-mail among all the participants involved in the production process of the digital newspaper articles.

As for the data analysis, first of all, it is needed to say that the function of the theoretical-analytical devices used in this study is to accomplish a process analysis of the CW of the texts elaborated by the students, and not only the texts (final result) already published in the online newspaper. In this sense, we can state that the main idea here is to develop a kind of a specialized support system for CW, which can, in fact, deal with the CW process of the participants involved.

In order to deal with such CW process, we will make use of the theoretical-analytical devices discussed above proposed by Lowry et al. (2004), which are subdivided

into: CW activities; CW strategies; CW roles; and CW modes (see previous section). As for the CW activities, however, due to the limitations of this paper, there was a cut in the whole corpus, including only the activities of brainstorming, converging on brainstorming, outlining and drafting of one of the students' subgroups in charge of the texts production of the digital school newspaper. The option for analyzing only such activities is, first of all, because the participants' collaboration through such activities is more intense, since there are both collective discussions about the texts to be written (brainstorming and converging on brainstorming activities) and the collaborative elaboration of texts properly said (outlining and drafting activities). Besides, these four activities constitute together a process that involves both the IM and e-mail use.

Indeed, the aim to use such theoretical-analytical devices in this paper is to show how they are interrelated categories along the CW process. Therefore, they do not act as separated and stagnant categories, but as interdependent ones. This allows a process analysis of the students' CW and not only a simple final product analysis.

Furthermore, the objective of such process analysis is to be able to observe the students' possible progress along the period in which the field research was accomplished. To do so, we will also carry out an analysis which will consider two distinct parts: in the first part, it will be analyzed one of the subgroup's CW process (CW activities; CW strategies; CW roles; and CW modes) in the first text elaboration for the school online newspaper in the beginning of August, 2008th, period in which the students were still starting to deal with CW; in the second part, it will be analyzed the CW process of the same subgroup, carried out in the beginning of November, 2008th, namely, three month later.

The collaborative works to be analyzed were carried out by Marcia (the subgroup's leader), Roberta and Sergio (For ethical reasons, the names of the students involved in the research were replaced by pseudonyms). The first collaborative work started with the brainstorming activity on August 2nd. The theme suggested by the subgroup for that first newspaper article was "Social network takes young people to fight in a shopping center in Campinas" (All the online newspaper articles were entirely published on: www.zimbaonline.tk). The students' intention was to write a text about the use of the social network MEADD to fix meetings among young people to fight in a shopping center in the municipality of Campinas, SP. In addition to the three students, I also participate as the interaction mediator (researcher – R).

First part of the CW process of the subgroup

(August 2nd, 2008): "Social network takes young people to fight in a shopping center in Campinas"

Activities of Brainstorming and Converging on brainstorming

(All the texts generated by means of IM e e-mail in this study are originally in Portuguese language. We just translated them into English language and, as well as in the original data, there was not any adaptation to the standard language, therefore, keeping exactly the students' original texts):

R: People, to be easier, Roberta and Sergio, choose different colors for you

Roberta: it is ok this way??

Sérgio: how change color??

Márcia: ahhhh..you see a small figure below where we type AB? click there to choose color

Sérgio: ... ok i see now!!

R: ok... so let's start?

Roberta: ok, and so how we start?

Márcia: ?? i dont know

R: ok. No problems. what are you thinking about the text?

Márcia: **ahh... i thought talk with friends about prohibition in shopping centers.**

Sérgio: what is the issue?? i dont...

R: Roberta, talk to Sergio about the text issue.

Roberta: ah ok... people are using MEADD (a social network) to meet in shopp center to fight.

Sérgio: ok. .

R: but how you intend start the text? talking about what?

Roberta: i'm dont know yet how

Márcia: **talking about prohibition of meetings on mead inside the shopp and talking about people that have nothing to do with that. but also that has to control the situation for no fight, ok?**

R: ok. very good!

Sérgio: i dont know much about but i will search.

R: i think you can start this way, talking about prohibition.... and showing some people's opinion about that.. but i think that would be good to show both sides of the coin in the text.

Márcia: ah ok

Roberta: good

Márcia: great

R: how about the poll? what you think?

Márcia: the poll i didnt think about

Roberta: i was thinking... what do you think about the minors' prohibition into the shopping centers of Campinas?

Sérgio: i didnt either

R:if you get some interviews it will be very nice!

Roberta: i think interview is gonna be cool!

R: now people. next time... search about the subject before our conversation. You gonna have more ideas about what you gonna write. ok?

Roberta:ok. i will!

Márcia: ahan

Sérgio: sure!

R: ok. how abou video? you gonna make one?

Roberta: sure!!

Márcia: **Roberta has many friends for interviews**

R:ok, then... any more questions?

Roberta: no

Márcia: **no**

Sérgio: ok

R: well, people this is it. Any problem just send me an e-mail

Márcia: **ok**

Sérgio: ok

R: e Márcia, you have to send the text for reviewing group till wednesday, ok.

In these two first activities of brainstorming and converging on brainstorming, in which ideas for a paper draft are developed and the group must decide what to do with such brainstormed ideas in real time through the use of IM, it was expected that students interacted about one of the texts that would be published in the online newspaper in the following week. More specifically, such interaction should involve a collective discussion about how they intended to write the text (how to start it, the kinds of positioning to be taken, how to use interviews, images, photos, videos etc.)

The possibility of co-construction of meanings in the interaction becomes more visible in the own IM structure, since it presents, as it was showed above (see section 3), a kind of structure similar to a face-to-face conversation, although with a more equitable turn-taking distribution among the group members. Once the conversation started, it is possible to note that the interaction took place without any voices overlapping or turn-taking interruption by the participants. Hence, it is a kind of interaction in which the students, even physically distant from one another, were able to interact synchronously with each other.

We can also observe that the topic discussion occurred in a metacommunicative level, since the interaction goal was precisely to construct a text by using as resources some representative elements or ideas about the own text. It is noted, for instance, that, very early in the interaction, Roberta and Marcia raised question about the way (kind of language) they should start the interaction (“ok, and so how we start? and “?? i dont know”). Indeed, it is possible to state, in this case, that the students’ questions take a metacommunicative character, since, in questioning the language use in a given digital communication means (IM), they (the students) would be dealing with the reflexive use of language, in a tentative to understand not only how each member should interact with each other, or make language use, by means of a specific digital tool (IM), but also in a specific context (a written online talk about a text that the students were preparing for a school digital newspaper). It is really important because, even accustomed to talk very frequently by means of IM, the students might feel a bit insecure in the interaction before another function for the tool use.

Such insecurity regarding the way they should interact in the brainstorming activity is likewise related to the type of interaction of such activity, which, in general, does not necessarily require a previous planning and an explicit coordination of what to be done. In this case, we can say that it is a kind of reactive writing, in which participants create a document in real time, reacting and adjusting to each other’s changes and additions without significant preplanning and explicit coordination, which may involve consensus or dispute, reflection, or off-the-cuff contributions (Lowry et al., 2004).

Nevertheless, as it was the students’ first online meeting to discuss about the text to be published in their newspaper, they did not seem to know how to deal with the reactive strategy. It is, in turn, related to the students’ roles and positionings in the interaction, since, in showing who they are, it is possible to observe how they socio-discursively position themselves in relation to one another. In the interaction above, for instance, despite introducing the initial suggestion for the text production, Marcia (the group leader) did not go beyond it; she limited herself to accept my suggestions (Researcher – R). Besides, she seemed as well to deprive from her leader role, probably because she was insecure, not in relation to her role itself, but in relation to the own writing work. Roberta, in turn, despite trying to participate to the text discussion, by proposing a question for the week poll, did not bring any expressive contribution for the text production.

Due to such situation, in which students were a bit confused of how to deal with synchronous text production, my role in the interaction was indeed crucial for their collaborative learning process. It is because I positioned myself as the interaction moderator, by always trying to keep the discussion control and to instigate the students, by means of questionings, to discuss about the topic with which they were dealing.

The student’s roles and positionings were also related to the CW modes, and, in turn, to the group awareness experienced by each group member, since differences in synchronicity and proximity affect directly how much group members can understand what takes place during a collective work. Such comprehension regards the participants’ informal awareness, in which they need to know where each participant is working, whether this is in the same location or distributed locations. In this case, even in a new collaborative activity, participants were aware that a written interaction through IM is synchronous, namely, at the same time (as a face-to-face talk), but each participant is located in a different place. Therefore, during a brainstorming activity, students are – or can be – aware that the IM use would be more suitable for changing initial information in real time for a text elaboration.

Moreover, we can say that the participants’ awareness is likewise constructed in respect to the knowledge of how their group is structured formally and informally in

terms of roles, responsibilities, status, process, and positions on issues, namely, their group-structural awareness, and their knowledge about the degree to which they are interested, paying attention, their level of commitment, and their emotional state – their social awareness. However, in observing the interaction above, we perceive that, as the students were starting to use IM for a specific purpose – to interact for elaboration of a text – they did not develop these two kinds of awareness (structural and social ones) yet. It is possible to perceive such lack of structural and social awareness, for example, in Marcia's attitude towards the text production, in which she did not play her leadership role in not charging their classmates ideas about the text elaboration.

In the CW process, subsequently to the activities of brainstorming and converging on brainstorming, there are the activities of outlining and drafting through the use of e-mail. In these activities, each group member sent by e-mail a part of the text to be elaborated, or even the whole text, for the other two members, who might change it with extra parts or just correct the initial text sent. As the three members of the subgroup created their own e-mail group, whenever a text was sent by the third member, the other two had already received and made (or not) their changes in the first text. Therefore, to observe the activities of outlining and drafting, it was only needed to show the last text (already a drafting) sent by any member of the subgroup. In the next activity analyzed (drafting), the last text was sent through e-mail by Sergio, after having passed by Roberta Petrilson and Márcia "pink color".

Activities of outlining and drafting

Hi folks, alright? (To differentiate texts (newspaper articles) from comments about texts on the e-mails, these ones will be marked in italics)

I read the text and for me it's good!!!

Sérgio.

There is now in Brazil a new social network website, o Meadd. However, there was a big problem because of this website, people were setting meetings at the shopping centers and it was taking place many fights. Because of these events some shopping centers of Campinas it was forbidden the entry for people under 18 years old on Fridays and Saturdays night.

Many young people think that what they did was totally nonsense, because they are there only to meet new people and friends. Other think that such proposal é very good, because many adolescents are not going to school classes to go to such meetings and running the risk to happen something bad, because most of times, their parents don't know where they are.

However, young people have be aware that is good to respect public places. Respect is the basis for everything!

As it was showed earlier, the activities of outlining and drafting are writing activities in which participants make a text. However, although the text above present some writing problems (spelling, punctuation and grammars mistakes), if the main objective here is, above of all, to analyze CW as a process, we will not deal properly with the possible writing problems of the students, but with the transformation of the discussions they had during the activities of brainstorming and converging on brainstorming into an outlining or a drafting text which fulfills the group's overall objective. In the outlining activity, the group must, therefore, decide what to do with the ideas pointed out on the activities of brainstorming and converging on brainstorming in a tentative to delineate, as a text, the directions the document will follow.

In fact, we can observe that, when constructing their text, the students tried to resume the previous ideas and subjects from the brainstorming activity to the drafting text ("Social network takes young people to fight in a shopping center in Campinas"), based on the previous notions that had been already recontextualized in the IM interaction. We note that Marcia's outlining text, for instance, when referring to alleged contrary opinions of some young people, established a relationship with the previous brainstorming discussion, since it brought back one of the brainstormed suggestions for the group's text ("i think you can start this way, talking about prohibition... and showing some people's opinion about that.. but i think that would be good to show both sides of the coin in the text").

As for the CW strategy used in the drafting activity, we can say that it is a kind of sequential writing, wherein one of the participants (Roberta) wrote at a given time an initial text (*an outlining in pink*) and passed it on to a second group member (Marcia), who completed the task, by inserting her part into the initial text (second outlining – in red). These two outlining texts sketched, then, the drafting text (in one single color), which was sent to the review group.

It is possible to state that the use of this kind of writing strategy, as it is more simplified, and therefore easier to coordinated the distributed work, has been more appropriate for the group, since it was their first time with such work. In the text above, Roberta intervened with her part in the initial document made by Marcia, namely, in the moment in which Roberta inserted her contributions, she was in the control of the document, even though her intervention has depended on the first text supplied by Marcia. The main advantage to construct an outlining text from a previous document, a reference text, is that it would be more unlikely to occur any lack of consensus from, for example, any overlap of ideas of each person. It is particularly important in the text production above, because, as it was the students' first job, there could be some consensus problems with the team's ideas.

If we observe the writing activities from the point of view

of the participants' roles and positionings, it is possible to note that the objectives of the activities (from brainstorming to drafting) were not clear for the students. It is because, although the students who participate here have been the same three students who comprised the subgroup and who participated in the IM interaction in the previous section, we can say that Sergio, for instance, was absent during the outlining activity, because he did not bring any contribution to for the two first outlining texts; he just made a comment by e-mail so as to justify his lack of participation in the text production ("I read the text and for me it's good!!!").

It must be remembered that the text production above, as well as most of the textual production carried out by the group members through e-mail, started somehow from the previous discussion between the three students via IM. This means that the discursive positionings assumed by the participants, both in relation to the topic under discussion and to one another (leadership or retraction positionings, for example), in the previous discussion could have, in fact, influenced considerably in the text production via e-mail.

We also noted that, differently from the brainstorming and converging on brainstorming activities, I (researcher – R) did not intervene in the interactions via e-mail, since the outlining and drafting activities presuppose a higher degree of students' autonomy and responsibility in the production of the text to be published. And, even without any formal warning (via e-mail, for example) from the leader Marcia, since she herself was late, we can say that the group fulfilled their role to make a text to be transformed into one of the newspaper articles, even without the participation of one of their member (Sergio) and without a previous review of the group leader (Marcia).

The assumption of the students' higher degree of autonomy and responsibility in the outlining activity is also related to the own CW mode used by the group. As it is a writing activity of text production and not about the text production, the sketches are made in different periods of time, namely, by means of an asynchronous digital tool: e-mail. This asynchronous nature allows the students to send texts to be stored and answered later, what makes e-mail a more appropriate tool to deal with complex problems of CW (see section 3).

As the document in the outlining and drafting activities were made asynchronously, and the group members could see, through the group e-mail created, what, when and how each participant made their text, we can state that such work becomes a means through which the group members can construct their awareness not only in respect to what each one is doing and how (workspace and informal awareness), but also in respect to their positionings, responsibilities, degree of involvement with the task, attention, and level of commitment (group-structural and social awareness – see section 3). Hence, for example, although they have not verbalized, Marcia

and Roberta were aware of the Sergio's lack of involvement in the group writing activities.

Second part of the CW process of the subgroup (November 07th, 2008): "Black people in Brazil: a matter of justice"

As mentioned above, the second part of the CW process took place on November 7th, 2008, namely, almost three month after the beginning of the field research at school, with the same group members (Marcia, Roberta and Sergio), and the same CW activities (brainstorming, converting to brainstorming, outlining and drafting). In fact, the objective of such kind of analysis, which includes an interval of three month between the first and the last activities, is to observe and assess the possible group's progress in respect to the CW process as a whole, be in terms of abilities with digital tools and the newspaper tasks, be in respect to the own members' relationship.

Activities of Brainstorming and Converging on brainstorming:

R: so folks...

R: what are thinking of the text about Black people in Brazil?

Roberta: ok..

Márcia: maybe talking about...

Márcia: the reality Black people suffers in Brazil?

Sérgio: yeah...talk about the prejudices they suffer

Márcia: i was looking at some websites here about salary. blacks make less than whites and this situation is very unfair!

Roberta: i think is a good idea! We could show that they do the same thing but they make a smaller salary.

R: this is very nice!

R: but how can you show that?

Sérgio: we can put a kind of research showingg...

Sérgio: comparing work market and the blacks...

Márcia: reseach is good!

Márcia: we could also put a photo of a black person in the work market.

Roberta: ? i did'nt...

Roberta:oh,. ok

Roberta: i was reading here on the web about the first black Minister of Brazilian Supreme Court (Supremo Tribunal Federal). i think is a good idea...

P: great Idea!

Márcia: very nice !!!!

Sérgio: it is gonna be very good!!

Roberta:so...take

<http://ultimainstancia.uol.com.br/noticia/56224.shtml>

Márcia: i think we could divide the tasks.

P: how come, Márcia?

Márcia: yeah.. beta (Roberta) could see about the

look

minister issue... and Sergio about the work market research???

P: ok Roberta and Sérgio, what you think?

Roberta: i think is gonna be good so!!!

Sérgio: no problemss!

Márcia: so i gonna write it to you and you put your part, ok??

Sérgio: nice.. i gonna see what i find here too

Roberta: send us that i gonna see it

Márcia: i think is gonna be cool. i gonna write about what i found here and i send you later. and what you find you send me till thursday so I send to the review group

P: that's it Márcia!! don't forget to send the text in the right day! until thursday

In this piece of conversation, which already includes both the activities of brainstorming and converging on brainstorming, it is noticed that, as well as in the first ones, the interaction takes place in the metacommunicative level, since the objective of the interaction is precisely to construct a text, by using as resources some representative elements or ideas about the own text. However, it is possible to realize that, differently of the first activities (carried out three months earlier), the turn-taking distribution among the group members is much more symmetrical, since the three students really bring contributions for the text production process. It supports that idea that IM can really contribute for a more equitable and relevant participation in the students' tasks during a CW activity.

Indeed, as the interaction above is more equitable and distributed, it is characterized as a typical example of reactive writing strategy, in which it is possible to realize that participants do not only bring their suggestions and doubts in real time to deal with the discussion topic ("Black people in Brazil: a matter of justice"), but they also create a document, react and adjust to each other's changes and additions, which involve consensus and reflection about the issue under discussion. We can perceive, for instance, that after Marcia's initial suggestion ("the reality Black people suffers in Brazil?"), Roberta and Sergio also bring their ideas for the topic discussion. Hence, it is possible to note that, differently from the first activities of brainstorming and converging on brainstorming (in August), the students, in fact, have been already accustomed and more involved with such activities.

The deeper involvement of the students with the CW activities is directly related with their discursive positionings. We can observe that, although the group members' roles have been the same as in the first interaction (Researcher (R), Marcia (leader), Roberta and Sergio), their discursive positionings have already presented considerable differences. In my case, for example, in spite of my role of moderator in the interaction, my positioning is visible reduced if compared with the first interaction carried out.

In the piece of conversation above, what particularly

calls attention is that, between the three students, the leader Marcia was the one who takes turn more times. When doing so, she assumes the role of facilitator for two times: in the first time, she praises the ideas of Sergio and Roberta ("research is good!" and "very nice!!!"); in the second time, in order to give a direction for the text to constructed by the group, Marcia brings her suggestions for the discussion, which were ratified and complemented by Roberta and Sergio. Besides, Marcia also brings suggestions for the own way with which the group could keep on the outlining and drafting activities ("yeah.. beta could see about the minister issue... and Sergio about the work market research???"). In the end of the interaction, after saying to her classmates what each one should do, she still warns them that the text should be ready until the following Thursday so as to be sent to the review group on time ("i think is gonna be cool. i gonna write about what i found here and i send you later. and what you find you send me till thursday so I send to the review group").

It is possible to state that Marcia's positionings are supported by a given power relation between the three students. It is because, although the interaction between them has been, in principle, symmetrical, Marcia, as the group's leader, is in charge of sending the texts produced to review team. It positions her, at least in certain moments, as someone with a higher power of decision-making inside her group.

In fact, when assuming her role of team leader, with all attributions and responsibilities, Marcia shows that she is more accustomed and engaged with the CW activities. Roberta and Sergio, when they also bring their suggestions or the topic discussion, seem, in the same way, more accustomed with the activities, what characterizes the document control as more shared with one another. We can say that it has become the students not only more self-conscious and self-sufficient in relation to the IM usage as a support tool for their CW activities, but also in relation to their roles and positionings along the activities.

In the end of the interaction above, we can observe that, when starting to deal with the topic "the reality of black people in Brazil", Marcia uses the internet to mention about the salary differences between black and white people. Roberta as well makes use of internet, by mentioning the source of information ("então... vê aí o <http://ultimainstancia.uol.com.br/noticia/56224.shtml>"), to suggest talking about the choice of the first black man in history to become one of the Ministers of the Brazilian Supreme Court. In the two examples, both Marcia and Roberta bring pieces of texts from other texts (from internet) to be recontextualized in the discursive situation wherein they are engaged. And it is particularly interesting because they seem to have learned that mentioning texts from internet which might support their points of view is a way to legitimate their discursive positionings before other interactants.

We also realize in the end of the piece of conversation

above that the students are not only able to arrive to a consensus about how the text should be done, but also are able to keep on the production process of the text they are doing together, when they mention, after the brainstorming and converging activities, the following activities of text elaboration (outlining and drafting). Indeed, it contributes to support the idea that, even being well accustomed to use IM for other purposes (chats among friends, for example), the students seem, in fact, to be acknowledged that the way they must use language by means of a digital tool depends as well of on language situationality (about what they are writing, for whom, whose intention/objective etc.); and it passes necessarily by the reflexive use of language.

Activities of outlining and drafting

hi folks,
i though your text parts were very good. i put a final part to close the text. see it.
Kss.
Marcia.

Black people in Brazil: a matter of justice

The brazilian people has to know about the black people's reality in Brazil. The black person suffers several kinds of prejudice, but there is one that most of population don't know, that they have a smaller salary than white people, working in the same function.

Inequality still exists. After so many years after abolishment of slavery racial inequality continues in the work market. The presence of blacks is much higher in jobs that pay lower swages. For example, in the IBGE survey, the average income of a white worker, from 1,096 reais per month, is 105% greater than that of a black person (source: http://www.afrobras.org.br/index.php?option=com_content&task=view&id=295&Itemid=2)

Inequality is still very large, but we cannot and we are not in favor of this type of situation. We must fight for the blacks have the same rights as whites, they were part of Brazil's history and we must respect them. But good news is that over time this situation is changing

This month has been elected by the Brazilian Supreme Court the first black minister of Brazil's history. More and more black people are gaining ground in the labor market and is gaining the due respect they deserve.

The funniest thing is that we Brazilians know the history of Brazil, the blacks who came here and the Indians who lived here it is almost impossible for a Brazilian who has not a relative or decendant of blacks or Indians as much as he knows he is a descendant of a European country.

We must continue working to ensure that Brazil is a

country fair, that have equality, we must fight for the blacks to win the same as the whites, they might have the same opportunities that can win what is right, only then build a better country. And not only why we must fight, to express our opinion, has many other things that our country is weak and that makes our country ourselves.

Poll: Do you think black people in Brazil still suffer a lot of prejudice?

At first, it is possible to notice here, differently from the first outlining activity analyzed, that the three subgroup members participate in the outlining activity, since all of them, in fact, bring their contributions to the text construction. Indeed, as we said above, it ratifies the idea that both e-mail and IM can contribute for a more equitable participation and reveal important socio-interactional positionings in the students' tasks during CW activities.

As for the CW strategy used, we can observe that it occurs in a more complex way if we compare it with the first outlining activity analyzed. He, we notice that the students make use of the parallel writing, because the outlining text is not made from a initial reference text, but each student works, as a separate writer, into discrete units, in order that each member works in parallel (see section 3). Indeed, such work division had already occurred in the previous activities of brainstorming and converging on brainstorming, in which Marcia had suggested to separate the tasks for each member ("yeah.. beta (Roberta) could see about the minister issue... and Sergio about the work market reasearch???"). In this case, it is possible to state that the parallel writing strategy presupposes more autonomy of group members, since the previous discussion via IM allowed them attributions of tasks and responsibilities about the text production. Marcia, for example, differently from the first outlining and drafting activities, added here a final unit (a final paragraph) in the last outlining text, in a tentative to sum up the final version of the text (drafting).

In respect to the roles and positionings assumed by the participants, first of all, it is worthwhile noting that, as we said above, all the three group members participate in the text production. Sergio, who had been absent from the first newspaper work, in fact, participates in the whole process of the text production above. As well, Marcia, who did not seem to be aware of her leader attributions, along such three-month period of CW, she seems to be much more aware of her role, and, therefore, she starts to assume discursive positionings more consistent with her function in the group. For example, in addition to taking forward the topic discussion in the brainstorming activity, she also plays well her leader role when she autonomously inserted one more final unit in the text previously ready. This shows that, differently from the first outlining and drafting activities, she, in fact, shows concern towards the text quality.

Finally, it is still possible to call attention for the fact that the students, when building their text, have tried,

somehow, to promote a dialogue with another discourse, taken from its interactional environment, to be recontextualized together with their text in a new context. We can note that the students, in fact, bring back to their text the subject matter that had been already thematized in the previous discussion via IM: "The reality of black people in Brazil". This was evidenced from the text units of each group member, who bring, along the whole text, elements (ideas) from the topic discussion accomplished via IM. For example, we observe that the main text issue – the unfair situation of Brazilian black people in the work market – was dealt by the participants by means of a specific issue: salary inequity between black and white people. This issue was then presented by each student (Marcia, Roberta and Sergio) with different points of views and examples.

CONCLUSIONS

When we showed some of the huge changes in information and communication technologies with the advent of internet and Web 2.0, above of all in respect to the author-reader relationship, our purpose was to understand how such changes could impact on new meanings for CW, especially in the school context.

In order to explore, then, such author-reader relationship, we proposed an empirical investigation, based upon some CW activities of a group of students in the elaboration of texts for a digital school newspaper. Even showing only part of the CW process, which involves since the brainstorming to the copyediting activities, it was possible to notice that the activities used for the analysis of this study (brainstorming, converging on brainstorming, outlining and drafting) can be regarded, in fact, as a CW process, because they do not act as separate categories, but they are interdependent. Then, it allows to accomplish a processual analysis of the students' CW, and not only an analysis of the final product.

Furthermore, as we pointed out above, a processual analysis was completed in the research with a comparative analysis of the initial and final works of the same group of students, whose time interval comprises a three-month period between the first and last texts made by them, in a tentative to show their progress obtained along such period.

When thinking about school and all the its traditional activities of text production, which, in general, are far from promoting collaborative work among pupils, we consider that the thing one seeks to achieve by means of CW needs to be something that stimulates our students, since "writing in itself" cannot motivate them to write. In this sense, the Web 2.0 exploration can bring, in fact, important contributions for collective work, for affective changes and for social construction of knowledge, what might envision, as we pointed out above, a new modus

operandi for CW.

In order for this to occur, it is necessary that school stops treating writing as an 'endogenous' practice, whose concern is to make it the result of a formal work exclusively focused on classroom activities, as the 'notorious' school essays, which require, in general, subjects that are unattractive for students, and whose unique addressee (audience) is the own teacher, who seems much more interested in evaluate them (essays) based on orthographical and grammatical 'errors' than actually on the students' creation process. Therefore, writing cannot be seen as an exclusive product of school, as if it were absent outside it, or, as in Ferreiro' words (2001, p. 20), "writing is important at school because it is important outside it", and not the opposite.

Indeed, the proposal of creation of a collective digital school newspaper is something that can, in fact, turn writing into an "exogenous" practice – acknowledging its importance outside school – and, therefore, can become it something exciting and challenging for students and teachers, since publication in a newspaper, specially on internet, provides the students a public space in order that they can openly discuss issues of their interest, which, in general, are hidden in the traditional school context.

Thus, it is possible to state that CW can be seen as learning processes that are always mediated by several social, historical and cultural artifacts. Hence, we can say that internet, as one of these artifacts, provides a lot of digital tools that can work as mediation instruments, and contribute for text production activities in a way that students and teachers can both be able to be authors (in the example here, newspaper writers), whose texts are published for a lot of people (worldwide), and able to engage in collaborative activities of effective writing in the school context.

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