ANALYZING TWO TEACHERS’ FORMATION COURSES IN BRAZIL ON THE USE OF NEW TECHNOLOGIES IN EDUCATION

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Abstract
This paper examines two extension courses of continuous teachers’ formation on the use of new technologies in education offered in two cities in the State of São Paulo, Brazil. The objective is to think about the formation provided and the aspects which are relevant to teachers’ technological formation. The theoretical constructs are related to the new vision of learning; the new education and the use of new technologies; the teachers’ role; digital literacy, and computer-assisted language learning.

Introduction
Due to the use of new technologies in education we have new interaction patterns and the redefinition of teachers and students’ roles with knowledge being constructed in a different way. Therefore, we need to provide pre-service, in-service and continuous education formation courses to teachers on the use of new technologies in education as well as to investigate the existing ones to know the kind of formation being offered and, if necessary, to redesign them so that they can meet the existing needs.

Currently with new resources and the use of technologies in education the new vision and concept of teaching and learning is of knowledge construction being shared. This Information Society calls for the redefinition of roles and changes in the way courses and activities are designed. The new, and broader, concept for literacy is associated with the digital context — elements do not occur in isolation but are intrinsically related. Thus, there is room for investigation and reflection, which is the goal of this study: to describe and analyze formation courses for English language teachers that aim at contemplating the aspects mentioned above as well as developing digital literacy in its participants.

Theoretical Constructs
New dynamics in learning are needed because of new ways of accessing information, thinking, reasoning, and many chances to use new technologies in education (Delcin, 2005, p. 56). Learning to learn is the current dynamic to Delcin (2005, pp. 61–62) and, according to her, knowing how to ask questions, how to access information and, moreover, how to convert information into knowledge is important. Education should
develop the capacity to propose and solve problems, make people curious, explore doubt, and rethink thought, or as Declin says to “develop argumentation, discussion, prediction, development, constant attention and the sense of opportunity” (Delcin, 2005, p. 63). Knowledge construction would, then, depend on the experiences people lived when doing some investigation and on people’s own style in retrieving and organizing information. Delcin (2005) believes new information and communication technologies (NICTs) have a relevant role, although their introduction in education does not aim at solving or extinguishing the existing educational problems.

Martínez (2004, pp. 96–97) emphasizes that the incorporation of new technologies does not aim at substituting for technologies currently being used (and which will continue to be used). The goal is to complement them so that the teaching learning processes become more efficient. Besides, access to information does not guarantee its conversion into knowledge; in order to do so, logical thinking, reasoning, and critical judgment are needed.

To Braslavsky education is much more than technological support — it depends on human components, ideals and values (2004, pp. 77–81). But Braslavsky reminds us that information transmission and learning are distinct things with learning being not connected to the new technologies as believed (2004, p. 90). Sacristán, on the other hand, sees education as a phenomenon and states that the most used metaphor to characterize it is information society (2007, p. 43). Sacristán posits that other ways of finding knowledge emerge as well as new environments in which learning is possible (pp. 42–45). Information is now a determining factor as well as the centre of productive relations, inclusion or exclusion. It indicates new relations among individuals, cultures and social classes but recalling that to educate is not only to inform, but also to prepare citizens and develop personalities is important (p. 47).

Having in mind this new vision of education and learning, it is also important to think about the teacher’s role. Lopes (2005) sees the teacher as a process organizer — that is, a driver on new roads (pp. 34–36). Lopes presents the teacher as an interface, since the teacher will build bridges between students and the information and will also drive and show ways of making the construction and acquisition of knowledge easier (pp. 40–41). The teacher is a researcher-educator, a promoter of bonds and sensibility. The teacher is

1 All in-text citations, excerpts and illustrations originally in Portuguese have been translated to English by us. If inaccuracies appear they were also present in the original.

2 The authors understand by NICT not only Internet, but all the microelectronic, informatics and telecommunication technologies that make acquisition, production, storing, processing and data transmission possible (in the form of image, video, text or audio).
responsible for supporting students when they are organizing information and developing critical analysis and reflection and always count on the unexpected.

While agreeing with Lopes for Kenski (2001) the teacher is now an agent of memory, value, innovation, and educational memory (p. 96). For memory agent, she understands

- the teacher who is able to accomplish interactions and exchanges among languages, spaces, time and knowledge, building bridges between students and technologies;
- the agent of values who influences behaviors and attitudes and fosters identity and sociability;
- the agent of innovations who helps in the comprehension, use, application and evaluation of available and utilized innovations; and
- the agent of educational memory who deals with theoretical and technical knowledge, abilities, attitudes, pedagogical rites, and other aspects taught and practiced in institutions that reflect specific ways of thinking, of feeling, and of acting.

These duties complement each other and are inseparable from the act of teaching/learning; thus, the teachers’ role enlarges instead of being extinguished in this new learning/teaching context.

Along with these aspects and notions come the concepts of alfabetização and letramento, terms that are related to digital literacy. Almeida (2005, p. 172) defines letramento as the appropriation of reading and writing with the aim of practicing citizenship; this is, having conditions to access the culture of the literate society using reading and writing in social practices. According to the author, writing is different from alfabetização, since it refers only to the ability of coding and decoding the writing, whereas letramento refers to apprehending this writing technology aiming at using it socially. Therefore, the access to the information and communication technologies (NICTs) needs to be integrated to a formation work which promotes conditions for the development and autonomy — the capacity to search, to select meaningful information, to interpret, to analyze, to deal with and solve problems — activities that favor the formation of critical citizens. To promote technological fluency is not simply learning a code or technology, it means using NICTs to evoke meaningful, autonomous, and

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3 In Portuguese (the language in which this paper was originally written) there are two terms to describe two different concepts of literacy. Since English does not offer the two terms, in this paper, we use the terms alfabetização and letramento.
continuous learning; to allow citizenship; and to enable knowledge production that will lead to better living conditions for people and society.

Offering computers and courses on computer use aiming at promoting digital literacy is not enough. These courses can allow people to make better use of technological resources but they may not favor “the formation of critical users as well as competent professionals to use the information and communication technologies (NICTs) in their activities” (Almeida, 2005, p. 176). At the same time they may generate development and promote exclusion, inequality and detachment. According to Almeida (pp. 183–184) what NICTs may bring, among other things, as effective contributions to the literacy: dialogue; thought reconstruction; analysis of one’s own representation (with the possibility of re-elaborating); and a new concept of mistake with space for analysis, revision, reformulation, and understanding that may lead to evolution and to learning.

These issues do not emerge isolated but are connected to the teaching-learning theories which help us understand how computer resources support education at school and help us understand how students learn and what aspects of this learning may be explored by computer resources (Barros & Cavalcante, 2000, pp. 21–22). With Behaviorism, there was the Behavioral CALL (Computer Assisted Language Learning) that, according to Warschauer & Healey (1998, p. 57), served its needs once it configured itself by repetition with the machine providing drills, grammar explanations and translation tests in various levels of language competence. Then, in order to serve the Constructivist approach, computer systems of non-linear access to information appeared along with the emerging techniques of Artificial Intelligence that enabled various ways of searching for information with knowledge construction more adapted to the cognitive characteristics of the students. To follow the social interactionism, the communicative CALL appears in which computer activities focused more on the ways computers are used, teaching implicit grammar, allowing and encouraging the students not to bond to pre-fabricated language, and making use of the target language, with teachers trying to integrate students in authentic environments and language by means of tasks, projects and contents using different abilities (Warschauer & Healey, 1998, pp. 57–59).

The Courses

This paper aims at examining two extension courses of continuous teachers’ formation on the use of new technologies in education offered in two cities in the State of São Paulo, Brazil. In order to do so, firstly, we will briefly present the courses — their objectives, contents, participants and results — and then we will compare and contrast them. For the illustrations we will use extracts and information provided by four participants: two from each course and chosen at random.
Course Number 1
This 32-hour course of English Language teachers’ formation on the use of the computer was offered as a specialization course at a private university in São Bernardo. The course had 22 participants who met once a week for 4 hours, during 8 weeks, adding up to 32 hours. The goals of the course were: 1.) to discuss the concept of literacy (letramento and alfabetização); 2.) to evaluate materials; and 3.) to create materials for the use in the English language classroom. Each meeting was divided in two sections: the first to discuss and reflect about theoretical constructs in a classroom (totally equipped with multimedia projector, computer with broadband Internet access, projection screen and video cassette player); and the second section in which participants worked in a computer lab performing practical activities, with twenty computers connected to broadband Internet, to experience the use of the machine and its resources.

At the beginning of the course, participants were asked to answer a questionnaire aimed at identifying: needs and wishes; their views on the teachers’ and students’ roles; the access they had to equipment and Internet; their current use of the computer; and their concepts and ideas in relation to the use of new technologies in education. The information and extracts below help us to picture better the participants and provided information essential to designing an effective module:

<table>
<thead>
<tr>
<th>Participant</th>
<th>Julio</th>
<th>Elaine</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Formation</strong></td>
<td>Languages English/Portuguese</td>
<td>Translation: Portuguese/English</td>
</tr>
<tr>
<td><strong>Use of computer</strong></td>
<td>E-mail</td>
<td>Office and Internet</td>
</tr>
<tr>
<td><strong>Access</strong></td>
<td>Home</td>
<td>Home</td>
</tr>
<tr>
<td><strong>Computador in classes</strong></td>
<td>Never used it</td>
<td>To show images and to use electronic dictionaries</td>
</tr>
<tr>
<td><strong>Teachers’ role</strong></td>
<td>Mediator</td>
<td>Mentor</td>
</tr>
<tr>
<td><strong>Reasons to use the computer in the language class</strong></td>
<td>To simplify the teaching process</td>
<td>Provide the students with variety</td>
</tr>
<tr>
<td><strong>Use of the computer</strong></td>
<td>As an extra tool</td>
<td>With specialized software to the teaching of English, or by means of an online radio.</td>
</tr>
</tbody>
</table>

When asked what is needed for the teacher to use the computer in the classroom the participants mentioned:
No doubts that the teacher has to have full control of the machine and its resources, because without these the teacher could eventually become a student of his/her own students. (Julio)

Handle the tools chosen for use, as well as its commands and particularities. (Elaine)

The classes were designed based on the initial questionnaire information. The theoretical and practical aspects approached were learning approaches and computer resources; the teacher’s role; the use of computer in education; CALL (Computer Assisted Language Learning); literacy (letramento and alfabetização); hypertext; word processor (Microsoft Word); slide show (Microsoft PowerPoint); Webquest; blogs; e-email and e-lists; search tools; and the design of a webpage in html and Microsoft Front Page Express.

After eight weeks, the participants were questioned about the use of the computers in the classes they taught, as well as the teacher they believed they were at the moment. The extracts below show both aspects:

Now, I can define myself as a teacher who is able to use a variety of tools and resources offered by the computer, consciously. (Julio)

I feel competent to configure work in the Microsoft Office (Word, PowerPoint) and Internet. However, now, I am aware that there are ways, various ways to arrange a same content and to work with it, making better use of tools and resources as well as adapting content according to the need that the moment demands. (Elaine)

I am certain that after this course, when teaching, I am going to be a teacher more aware than I was before. (Julio)

A professional who helps the student build knowledge. A teacher who does not have prompt answers to everything, a teacher who allows the student to think, to create his/her own way, a teacher who, at the end of the process, takes part on the issue. (Elaine)

These answers make us notice that significant changes occurred that lead us to believe that there was a certain letramento by the participants, once they are concerned about the use they make of the computer.

**Course Number 2**

This 36-hour course for language teachers on the use of new technologies in education was one of the courses offered as a specialization course in at a private university in São Paulo. The course had 18 participants and 4-hour meetings per week for 9 meetings. Its goals were to: (1) make teachers aware of the possibility of using new technologies, enabling them to use technological tools that would help in the teaching-learning of
languages; (2) provide a reflective view about the possibilities, advantages and limitations of the new technologies; (3) develop critical sense and autonomy to evaluate, adopt, and adapt the technological resources according to their teaching context; and (4) know resources and become aware about the need of continuous research on the use of new technologies. Each meeting was divided into two parts: the first one was discussion and reflection in the classroom (equipped with multimedia projector and a computer connected to Internet) about theoretical aspects; in the second part, to experience the use of the machine performing practical activities, using and exploring some tools participants worked in a computer lab with twenty computers connected to the Internet.

At the first meeting, participants answered questionnaire the objectives of which were to identify their needs, wishes, concepts and ideas in relation to the use of new technologies in education and the teacher’s role; their access to equipments and the Internet; information about how they used technologies in their practice and formation; and their relation to technologies — more specifically to computers. The information and extracts below helped us to picture better the participants and helped the teacher/researcher design the course:

Table 2: Data Provided by Course Number 2 Participants in Initial Questionnaire

<table>
<thead>
<tr>
<th>Participant</th>
<th>Monica</th>
<th>Sophie</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Formation</strong></td>
<td>Languages</td>
<td>Languages</td>
</tr>
<tr>
<td></td>
<td>English/Portuguese</td>
<td>Spanish/Portuguese</td>
</tr>
<tr>
<td><strong>Use of computer</strong></td>
<td>Word, PowerPoint, Internet and Photoshop</td>
<td>Word and Internet</td>
</tr>
<tr>
<td><strong>Access</strong></td>
<td>Home and work</td>
<td>Home and work</td>
</tr>
<tr>
<td><strong>Computador in classes</strong></td>
<td>PowerPoint</td>
<td>Video clips and PowerPoints</td>
</tr>
<tr>
<td><strong>Teachers’ role</strong></td>
<td>Raise interest and curiosity</td>
<td>Make things more dynamic</td>
</tr>
<tr>
<td><strong>Reasons to use the computer in the language class</strong></td>
<td>Interaction, more dynamism</td>
<td>Allow autonomy, develop search spirit, better performance (teacher and students)</td>
</tr>
<tr>
<td><strong>Use of the computer</strong></td>
<td>Data show, access game pages, texts, chats</td>
<td>?</td>
</tr>
</tbody>
</table>

When asked what is needed for the teacher to use the computer in the classroom the participants mentioned:

Operate it. If the teacher does not know how to use the programmes, he will not make good use of it. (Monica)

Know how to use the multimedia, data show, create PowerPoint presentations, etc. (Sophie)
Based on the data obtained in the questionnaire an initial plan, subsequently modified because of other needs, was designed. The course addressed the following theoretical and practical aspects: new technologies and their challenges, CALL and its relation to the learning theories, computers in education, literacy (*letramento* and *alfabetização*), teacher’s role, hypertext, distance learning and platforms, word processing programs, slide show, e-mail and e-lists, search tools, website visits, Webquest, Microsoft Front Page Express, and access and exploration of two platforms.

At the end of the course, the participants were questioned about the use of the computer in their classes and the teacher they believed themselves to be at the moment. The extracts presented below illustrate both aspects:

I can create certain activities and know where to get different materials for the classroom (. . .) knowing when its use is really relevant. (Monica)

I feel I have more options, for example: look for sites for the students, data show, Orkut, MSN, exchange of information between the students/teacher and much more. (Sophie)

I don’t know if my future classes will capture the students’ attention but I’m conscious about how to work with the contents. (Monica)

Trustful (. . .) I feel freer when thinking about the activities. (Sophie)

The answers provided by the participants made us notice significant changes that make us believe that a certain level of *letramento* existed given the evidence of concern in relation to the use of the computer.

**Comparing and Contrasting the Courses**

The courses had many things is common — similar objectives and providing the participants with almost the same theoretical constructs and practice. However, even if the courses were dealing with the same aspects and theoretical constructs, the readings and the teachers were not the same. We had two teachers with different life experiences and practices, teaching similar courses with similar theoretical constructs, and dealing with different participants and contexts.

The courses are compared below in Figure 1.
As the figure illustrates, both courses dealt with almost the same theoretical and practical aspects, even if they provided participants with different texts and practical experiences. When considering the theoretical aspects, both courses dealt with the use of new technology, changes and new challenges in education; the teacher’s new role; CALL and the teaching/learning theories; the use of computers in education; literacy (alfabetização and letramento); and hypertext. The only difference was that course number 2 also covered distance education and the use of platforms, an aspect not addressed in course number 1.

When comparing the practical aspects both courses dealt with word processing (Microsoft Word); slide shows (Microsoft PowerPoint); e-mail and e-lists; search tools; website visits; Webquest; and Microsoft Front Page Express. However, course number 1 focused on blogs and html, while course number 2 offered its participants the chance to visit and explore two platforms.

**Final Considerations**

The objectives of the courses were to enable language teachers to
• have contact with the use of new technologies allowing them to better use some tools that would help them in their teaching practice;
• reflect upon the possibilities, advantages and limitations of its use;
• develop criticism and autonomy to evaluate and use new technologies;
• have contact with certain resources and tools, and
• make participants conscious about the need to constantly research about new technologies.

This study helps in reconsidering the content and objectives of courses making us aware, for example, of the need to create more opportunities for online experiences for the participants. In comparing and contrasting the courses and results we considered that the theoretical and practical aspects of the courses helped these language teachers in their ongoing use of new technologies in education.

We believe that both courses offered space for exchange, interaction, knowledge construction, and respect to different ways of thinking (Delcin, 2005). As well we believe that the information and excerpts collected via questionnaires, the final papers and materials produced by the participants provide evidence of the development of the capacity to critically search for and select information and to about dialogue as well as to reconstruct thought (Almeida, 2005). The courses provided participants with theoretical constructs and the chance to experience practices in the laboratories that were not limited to operational aspects of the equipment. We believe that both courses offered participants a level of letramento and hope they continue their studies and investigations in order to reflect on their practices.

References


Braslavsky, C. (2004). As políticas educativas ante a revolução tecnológica, em um mundo de interdependências crescentes e parciais. (The educational policies and


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