Integrating Blogs in Primary Education

Nikleia Eteokleous-Grigoriou and Stella Photiou

Introduction

With the rapid diffusion of the Internet; new approaches to learning were created (Crosta, 2004). As a result, the interest in the development and use of online learning has been steadily increasing (Dabbagh & Kitsantas, 2004) providing "anytime, anywhere learning." More specifically, the technological advancement in information technology and telecommunications resulted in the development of the Web 2.0 and created the appropriate framework for user participation. The traditional one-way communication is transformed into a two-way communication, and process of information. In Web 2.0 users are Contributing, Collaborating, Creating—the 3C's (Ala-Mutka, Punie, & Ferrari, 2009). Various online tools have emerged such as blogs, wikis, discussion forums, online collaborative documents, online sharing of documents, pictures and videos, podcasts, RSS feed, etc. Millions of people use various social and professional networks, such as Facebook, MySpace, Twitter, Delicious, Flickr, LinkedIn, and Live Journal. Nowadays, with the advent of Web 2.0, the Internet has become truly interactive. The aforementioned tools and networks are excellent examples of how definitions, ideas, photographs, videos, and voice can be shared over a powerful Web 2.0 Internet. Technology provides a realistic, visually compelling, and motivating interactive environment for developing the life skills and knowledge needed for today's globalized, hi-tech environment (Goddard, 2002). The Web 2.0 technologies became an essential tool of daily life and a crucial part of students' personal knowledge tools (Lee, Miller, & Newnham, 2008). Consequently, the Web 2.0 tools can be educationally exploited for teaching and learning purposes towards achieving educational objectives, thus transforming social to educational networking.

N. Eteokleous-Grigoriou (✉) • S. Photiou
Department of Primary Education, Frederick University,
7, Y. Frederickou Str., Pallouriotisa, Nicosia 1036, Cyprus
e-mail: n.eteokleous@frederick.ac.cy; stellaphot@hotmail.com

Blogs are one of the most popular Web 2.0 tools. In 2009, 133 million blogs were online and two new blogs are created every second! It is supported that blogs have educational value given their characteristics and the opportunities provided to users (Davis, 2005; Eid Neurolearning, 2005; Richardson, 2010). Even though they were around for years, they recently emerged as a popular means of communication, discussion, collaboration, and information sharing. Blogs are Web publishing tools which provide teachers and students an interactive platform where text, images, and links to other blogs, Web pages, are posted mostly focusing on a particular subject. It is supported that blogs have educational value given their characteristics and the opportunities provided to users (Richardson, 2010). Blogs are most popular among students since they are virtual and can be worked at any time and place (Richardson, 2010). It is extremely beneficial to integrate Web 2.0 tools; in this case blogs, as learning-cognitive tools, to add educational value and enhance the teaching and learning process and promote the development of higher-order thinking skills, such as application, synthesis, evaluation, creation (Anderson & Krathwohl, 2001). It can be also suggested that by default blogs facilitate and promote the development of a community. The members of the community are the bloggers, since bloggers share a common interest (a specific subject under "investigation"); connecting to each other by posting comments and discussing. Students extensive use of technology is possible to facilitate the integration of blogs (and technology overall) as tools in the teaching and learning process. Being part of our students' digital world might be more possible to raise their interest, motivate them, transform the classroom environment, and properly prepare them for the rapidly changing information society's needs and demands.

Main Aim of the Study

The current study evaluates blog integration as an educational tool within the teaching and learning process and specifically within the Language and Linguistics course in fifth grade (Subject examined: The time machine) and its role in developing a Community of Inquiry (CoI). The research objectives that guided the current study are the following:

– To investigate the effectiveness and role of blog in achieving specific learning objectives when it is integrated as an educational tool within the teaching and learning process,
– To examine the development of a blended learning environment with the use of blog in relation to in-classroom activity,
– To identify how the role of educator and students differentiate within a blended learning environment,
– To investigate the development of a Community of Inquiry (CoI), by identifying the existence of the three parameters that characterizes a CoI: cognitive, social, and teaching presence.

Theoretical Background

Blogs

Blog is considered an important tool of the Web 2.0 toolbox (Richardson, 2009) and blogging has become one of the most popular Web 2.0 activities. The origins of the blog emerged from the short term of "web log" (Bauer, 2011); an online chronological collection of personal commentary and links that was first used by Barger (1997). A blog is a Web site that is maintained by an individual or a group where readers can comment on blog posts to supply more information and discuss various issues (Allen, 2011). A person that owns a blog and/or posts messages on blogs is called a blogger and the actions within its environment are known as blogging (Hill, 2004). Blogs contain text, graphics, images, videos, and hyperlinks to other Web sites. Bloggers comment on the posts, discuss, argue, and provide their opinions. Blogs create conditions for interaction, reflection, ideas' synthesis, exchange and discussion, self-evaluation, and feedback (Petko, 2011; Sim & Hew, 2010; Zawilinski, 2009).

Blogs and Education

Given the great educational blogging potential, numerous educators have already started using blogs in the classroom. Blogs can be integrated as educational tools across the curriculum, from primary to higher education, achieving collaboration among students and educators even in different schools and countries. Many studies explored the features and educational benefits that blogging offers to students, and discussed the major blog uses in education (Churchill, 2009, Downes, 2004, Richardson, 2009; Richardson, 2010; Siemens, 2005). Specifically, studies integrated blogs into their teaching exploring the learning value of blogging (Chen, Cannon, Gabrio, & Leifer, 2005, Makri & Kynigos, 2007), i.e., for group teaching, collaborative learning, and Web-based collaboration (Grassley & Bartoletti, 2009). Educational blogs provide a practical online platform for discussions that hastens the acquisition of knowledge and learning (Liu & Chang, 2010). Additionally, blogs provide space for the students to reflect and publish their thoughts and understandings, and opportunities for feedback, scaffolding of new ideas, as well as collaborative learning. Blogs also promote the development of higher-order thinking skills such as application, synthesis, evaluation, creation (Anderson & Krathwohl, 2001), and improve flexibility in teaching and learning. Finally, blogs feature hyperlinks, which help students understand the relational and contextual basis of knowledge, knowledge construction, meaning making and experience connective writing (Liu & Chang, 2010; Penrod, 2007; Richardson, 2009). According to Oravec (2002) blogs encourage self-expression and collaboration, which in turn are reflected in enhanced critical thinking skills. A blog offers extended interactivity, increasing students' involvement and motivation (Eteokleous & Pavlou, 2010).

Students can receive instant feedback from the instructor, peers, and other visitors, which enhances learning efficiency (Kaplan, Piskin, & Bol, 2010). Blog participants perform connective writing since they need to read carefully and critically, and develop context that is clear, organized, and convincing. There is a synthesis of ideas, self-evaluation, and reflection. Experiencing blog writing promotes critical, analytical, relational, and creative thinking. It also combines collegiality and social interaction, developing working and social relationships among teachers, educators, and professionals (Davis, 2005; Eid Neurolearning, 2005; Richardson, 2010). Eteokleous (2011) explains the development of student-centered environments and how students become educational content creators, having an increased role in the teaching and learning process when blogs are used as educational tools. Instructor's role in a blog learning environment is extremely important. Glogoff (2005) emphasizes that the instructors should be aware of the delicate balance between the synchronicity of time and place on the one hand and the need to keep discussions focused on the topic. Additionally, Kim (2008) states that the success of the system relies on teachers' capability in providing the appropriate resources. So, it can be suggested that although teaching and reflecting through blogs constitutes an effective medium for teaching, it must be applied in a proper way with the guidance of the instructor in order to foster the best teaching practices (Eteokleous & Nisiforou, 2013a, 2013b; Karaman, 2011).

Blog's pedagogical affordances were examined and reported by various researchers. First of all, it is supported that blogs motivate students to engage positively in the writing process (Barrios, 2003; Cottle, 2009; Shifflet, 2008; Trammel & Ferdig, 2004). Additionally, blogs enhance participation and interactive communication opportunities (Angelaina & Jimoyiannis, 2012) promoting both individualized (Cottle, 2009; Shifflet, 2008) and group reflection on learning experiences. The blog's pedagogical affordances also include the support of authentic learning tasks through peer assessment and formative evaluation of student work (Angelaina & Jimoyiannis, 2012) as well as the promotion of critical thinking and increases learner autonomy (Richardson, 2010). Finally, blog facilitates student collaboration within a community of learners (Nelson & Fernheimer, 2003) and encourages and support blended learning activities by effectively changing formal and informal learning.

Blog as Cognitive-Learning Tool

Blogs serve numerous purposes such as personal, professional, and educational. Focusing on the educational use of blog, four extra categories can be identified: Blog as online course tool, blog as a discussion forum, blog as a research tool, and blog as cognitive-learning tool (Eteokleous & Nisiforou, 2013a, 2013b). For the purposes of the current paper, it is important to better explain the cognitive-learning tool category. Eteokleous and Nisiforou (2013a, 2013b) attempted to define blogs as cognitive-learning tools and examine their role in the teaching and learning process as well their effectiveness in achieving specific learning objectives.

The current paper suggests that blog integration in the teaching and learning practice is defined as the use of blogs by students as a cognitive-learning tool that enhances their learning experience and supports the achievement of specific learning goals. It can be integrated in all educational levels (i.e., pre-primary, primary, and secondary, as well as higher education in numerous departments) and fields and in various subjects (i.e., Mathematics, Literature, Science, etc.). This approach is related to the *learning with* computers or computers as mindtools (Jonassen, 1999b), where computers and overall technology is introduced as students' partners within the teaching and learning process. *Learning with* technology and *effects of* technology use characterizes this trend. *Learning with* requires integrating computers and overall technology as mindtools in the classrooms to support constructive learning. Educators embed or apply technology capacity in the context of ongoing teaching and learning in different school subjects. Based on the above, students learn how to use various technology applications not as an end in themselves, but as tools that help them execute their tasks and promote the balanced development of their mental abilities. As a result they do not learn from technology, but technologies support meaning generated by students (Bielaczyc & Collins, 1999; CTGV, 2003; Jonassen, 1999a, 1999b; Jonassen, 2000).

Blog is integrated within the teaching and learning practice for numerous years; however, the development of a pedagogical framework is extremely important. It will highlight a set of key criteria and parameters for blogs to be integrated as cognitive-learning tools within the teaching and learning process in order to achieve real blogging. Additionally, educator's and students' role should be further examined and clarified. Finally, research on the following needs to be conducted: blog's design, format, content used and uploaded, tools and gadgets employed.

Community of Learning

Communities of learning in schools have been examined by various researchers providing definitions, characteristics, the role as well as the importance of communities of learning. According to Wenger, McDermott, and Snyder (2002) communities of learning "…are groups of people who share a concern, a set of problems, a passion about a topic, and who deepen their knowledge and expertise in this area by interacting on an ongoing basis" (p. 4). Few years later, Wenger (2004) defined communities of learning as "…groups of people who share a passion for something that they know how to do, and who interact regularly in order to learn how to do it better" (p. 2). In the learning environments, the role of a community is to support and facilitate socially constructed knowledge (Job-Sluder & Barab, 2004; Palloff & Pratt, 2005). Finally, Loving, Schroeder, Kang, Shimek, and Herbert (2007) supported that "A learning community is a group of autonomous, independent individuals who are drawn together by shared values, goals, and interests and committed to knowledge construction through intensive dialogues, interaction, and collaboration" (p. 179).

For a learning community to be developed; face-to-face interactions are not necessary. Nevertheless, various online tools can be employed for the development of a learning community. As Loving et al. (2007) suggest, "these virtual learning communities can be built in two forms, synchronous and asynchronous. Blogs are considered one of those tools that can support and promote the development of a learning community, either a fully immersed learning community or either a blended learning community (Oravec, 2003). Consequently, blogs have an important role to play in building an online community of learning.

Community of Inquiry

The current study examines the development of a Community of Inquiry (CoI). C. S. Peirce and John Dewey were the first philosophers to introduce the concept of the community of inquiry. The introductory concept described the nature of knowledge, formation and the process of scientific inquiry. An educational community of inquiry is a group of individuals involved in a process of empirical or conceptual inquiry into problematic situations. Those individuals collaboratively engage in purposeful critical discourse and reflection to construct personal meaning and confirm mutual understanding. The CoI requires intersubjective agreement among those involved in the process of inquiry for legitimacy since it emphasizes that knowledge is necessarily embedded within a social context (Seixas, 1993; Sharp, 2007).

The theoretical framework of the current study focuses on the Community of Inquiry (CoI) model as has been suggested by Shea and Bidjerano (2010) where social, cognitive, and teaching presence are related. The model is based on the work of Garrison, Anderson, and Archer (2000) which introduced the original model of CoI. The CoI model assumes that effective online learning requires the development of a community that supports meaningful inquiry and learning (Shea, 2006). Garrison et al. (2000) developed this model which assumes that deep and meaningful learning results when there are sufficient levels of three components: teaching, social, and cognitive presence. The model outlines the theoretical elements essential to successful knowledge construction in collaborative online environments. The social presence relates to the establishment of a supportive environment such that students feel socially and emotionally connected to each other and to the instructor in a computer-mediated environment. The elements of the social presence are demonstrated through emotional expression, open communication, and group cohesion. The teaching presence involves the design, facilitation, and direction of cognitive and social processes leading to personally meaningful and educationally worthwhile learning outcomes. Elements of the teaching presence include setting curriculum and activities, shaping constructive discourse, and focusing and resolving issues. The cognitive presence is defined as the extent to which learners are able to construct and confirm meaning through continuous suggestion and discussion in a critical community of inquiry. The elements of the cognitive presence include triggering

event (sense of puzzlement), exploration (sharing information and ideas), integration (connecting ideas), and resolution (synthesizing and applying new ideas) (Garrison & Arbaugh, 2007; Swan et al., 2008).

Research Methodology

To address the above, a case study approach was employed where qualitative (through in-classroom and blog's observations) and quantitative (through questionnaires) data was collected (Creswell, 2003). The classroom intervention took place within the context of the Language and Linguistic and Art courses during October–December 2011. The unit delivered was "Time Machine" and 20 fifth graders participated at the study. For the purposes of teaching the lessons a blog was developed using *Blogger*. The blog was integrated as an educational tool in the teaching and learning process within six, 40 min lessons (five Language and Linguistics lessons and one Art lesson). A blended learning environment was developed through in-classroom and online activities as well as homework activities. An introductory lesson took place at the computer lab in order to familiarize students with the blog (uses and tools) since it was the very first time used by the educators and the students. Students were given notes regarding the blog use. Regarding the rest of the lessons, both the classroom and the computer lab were used. Additionally, in some cases students were asked to use the blog at home.

Various questions were posted on the blog throughout the five Language and Linguistics lessons. The open questions posted at the blog were related to the subject of the theme delivered ("Time Machine") and they aimed to contribute in achieving the lesson's objectives. The educator constantly reminded students to comment on their classmates' blog—posts, report if they agree/disagree, provide arguments, suggestions, etc. The goal was for a discussion to be conducted, where students' opinions, views, thinking would be revealed at the blog wall. The teaching intervention was designed and developed by the authors in collaboration with two teachers which then delivered the lessons.

The quantitative data collection method conducted using a questionnaire given to students by the completion of the three lessons in the presence of the teacher. Thus, the students had the opportunity to make any clarifying questions about the questionnaire, which was created based on the Community of Inquiry questionnaire (Swan et al., 2008). The questionnaire consisted of two parts: (1) Demographic Data (e.g., gender, country of origin, use and frequency of computer use, use and frequency of Internet use) and (2) Communities of inquiry statements which consists of three main parameters: teaching, social, and cognitive presence. Each parameter consists of several sub-parameters; as a result the questionnaire includes a total of 34 statements. Students were asked to rank the 34 statements using a 5 point Likert scale, where 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, and 5 = Strongly Agree. The statistical package SPSS (Version 19) was employed in order for the quantitative data analysis to be performed. It includes descriptive

statistics, namely frequencies, percentages, averages, and standard deviations for all variables of the questionnaire, as well as Cronbach's alpha (α) for internal consistency.

The qualitative method of data collection was conducted by observing in-classroom and blog activity—teacher and students' blog postings. Blog postings were analyzed using an open coding system, attaching labels to blog postings (words or lines of data) and then describing the data at a concrete level, before moving to a more conceptual level (Anfara, Brown, & Mangione, 2002). Firstly, this process was conducted within each blog questions (students' responses) and then across all blog questions (all students' responses). The iterative coding process employed leaded to the identification of themes. It is important to clarify that a blended learning environment was employed where a combination of in-classroom and online activities were performed. Consequently, the students evaluated the development of a CoI based on their experience within the blended learning environment. The data collection process was conducted during October–November 2011.

Results

Demographic Characteristics

Regarding the gender of the students, 55 % was boys and 45 % was girls, while the country of students' origin varies. Specifically, the majority of the students were coming from Cyprus (25 %), followed by Georgia and Ukraine (10 %). The vast majority of the students (85 %) use the computer, of which 25 % use it once per week and 5 % use it daily (mean = 2.8; SD = 1.11). The majority of the students (70 %) replied that using the Internet, of which 25 % of students answered that rarely uses it, while 15 % use it once per week (mean = 2.5; SD = 1.19). A 5-point Likert scale was used, where 1 = no use and 5 = daily.

Communities of Inquiry: Blended Learning Environment

The analysis of the questionnaires revealed some interesting results regarding the development of a Community of Inquiry (CoI) through the use of blog as the main educational tool. Specifically, it can be supported that a CoI was developed through the Lesson Time Machine, where the blog was integrated as an educational tool within a blended learning environment (combination of in-classroom and online blog-based activities).

Generally, it can be suggested that the teacher presence has a vital impact since the mean was 4.80 (SD = 0.242; α = 0.765). The important role of the educator is highlighted. Specifically, the results suggest that the teacher was properly organized, gave immediate and appropriate instructions, and successfully played the role of the

facilitator, so that the students felt comfortable to engage in productive discussions and reflections. The aforementioned mainly took place within the in-classroom activities. On the other hand, the educator did not participate in the blog discussions besides providing questions and clear instructions on students' responsibilities. The educator wanted to grant students the freedom and flexibility needed to express themselves within the blog, without interfering or providing any guidance, help, and/or encouragement, thus not having an active role in the blog. Nevertheless, the educator was observing and following blog activity. The teaching presence within in-classroom and blog activity revealed to be really influential and it played an important role within the teaching and learning process. The educator facilitated and helped students within the teaching and learning process, providing them with clear, direct instructions. Specifically, direct instruction was highly apparent mainly within in-classroom activities than blog activities, since the educator managed to focus discussion on relevant issues, helping students to gain understanding and better realize and comprehend the subjects under investigation. In addition, within in-classroom activities the educator provided constructive feedback to the students. Through the blended learning environment developed the topics and subjects under investigation were clear enough, and the educator provided freedom and flexibility to the students, as well as increased responsibility for their own learning based on their needs, demands, and interests.

The same picture is observed regarding the social presence, though being graded relatively lower scores than the teaching presence. The data supports that it was significantly noticeable ($M = 4.42$; SD $= 0.51$; $\alpha = 0.709$). Students felt to great extent that they belonged to a group in which they could freely express their views, opinions, and thoughts. The interaction developed among students within in-classroom as well as through blog's activities seemed to have strengthened the sense of collaboration. The educator managed to develop a community where the educator and students felt closed and connected to each other, felt part of the course (developed sense of belonging in the course—group cohesion), not only communicating for educational purposes, but interacting socially as well (Affective Expression). Additionally, the participants freely expressed their ideas, views, and opinions through not only the online tools but within in-classroom, vividly participating in the course discussion and frequently interacting with the rest of the participants (Open Communication). Students shared and discussed with their peer views and opinions and in some cases they felt instant connection to other peers. An initial introduction, a welcoming note, and the online ice-breaking activities from the educator helped the students to open up and develop a sense of belonging. Channels of communication were developed among students and the educator through the in-classroom and blog activity showing that the open communication parameter was highly present. Consequently, it can be supported that the social presence has been developed through the use of blogs as educational tools.

Finally, the cognitive presence, had also a really "strong" appearance ($M = 4.57$; S.D. $= 0.38$; $\alpha = 0.801$) within the blended learning environment developed (blog and in-classroom activity), however not as strong as the teaching presence. Specifically, it emerged that the topic of the lesson stimulated in a great degree

students' interest, and online postings enabled students to understand the basic concepts of the course. The educator gave various interesting activities, motivated students through questions; however, she did not provide adequate extra academic and scientific information and resources to study. More specifically, the triggering events were greatly apparent attempting to attract and motivate students. The activities developed and performed piqued students curiosity and felt motivated to explore content related questions. It seems that the questions/activities designed and performed increased students' interest regarding the curriculum concepts under investigation and that their interest, motivation, and curiosity were enhanced. Exploration was one of the elements of the cognitive presence that did not get high scores since the educator did not provide adequate academic and scientific information and resources to the students. Additionally, brainstorming, as a process was promoted and implemented through in-classroom and blog discussions, which it helped students come up with answers and solutions. Finally, the total mean for the three presences was 4.59 (SD = 0.38). Revealing that the development of Community of Inquiry was achieved in a great degree.

Blog Activity

The blog activity reveals blog role in developing a blended-learning environment where in-classroom and blog-based activities are integrated in achieving the lesson's objectives. Overall nine posts were uploaded by the educator. Specifically, seven of the posts were questions related to the subject under investigation. The very first question posted at the blog was for testing purposes ("*Try to comment on a blog post*"). This question was posted throughout the introductory course conducted in the computer lab in order to give the students the opportunity to experience blogging. Their responses were used by the teacher in order to begin the in-classroom lesson and discussions regarding "Time machine."

The second question posted at the blog was related to a video watched and discussed as an introduction to the lesson "How do you imagine a time machine? Can you describe it? How does it look like externally and internally? What can it do?" Students' replies focused on describing the time machine internally and externally, and what one can do when using a time machine. During the Language and Linguistics course the following question was posted: "Imagine that you are in the time machine ready to travel. Where would you like to travel, into the past or in the future and why? What would you change there?" The current question aimed to trigger their imagination. Analyzing students' responses it is revealed that most of them had special preference to travel into the past, and specifically to find out where their ancestors lived and how they behaved. Additionally, students reported that they would like to travel to the past in order to correct their mistakes, to travel to ancient history eras such as Ancient Greece and the Dinosaurs' Era. Finally, some others chose to travel to the future in order to find out how life would be and to make

sure that they will make their dreams come true. The students were requested to begin addressing the questions in class and continue at home.

The next step was to discuss an article included in the Language and Linguistics book. The educator used the students' responses in the previous blog question as an introduction to a book article. In particular, the article was taken from the Focus magazine, entitled "Travelling in time" and uploaded at the blog in order for the discussion to be continued online. After studying and discussing the article in the class, two questions were posted on the blog. The fourth and fifth questions were as follows: "Changing the events in the past and in the future: What would you like to change if you went to the past or the future? What event would you like to change and/or influence?" and "Persons from the past: Which person from the past would you like to represent? What decisions would you change if you were that person?" The students started answering the question at school and continued at home.

By the completion of the Language and Linguistics course the students were requested to visit the blog once more in order to vote in which era they would like to travel using the time machine. It was a multiple question voting system. The choices were the following: Dinosaurs Era, Ice Age, Ancient Greece, their childhood, the future, the era in which their ancestors lived (parents/grandparents), and other. The students chose to travel to the future and childhood, to the Dinosaurs Era and their ancestors' era. Once more, the educator requested the students to use the blog from home.

Finally, during the Art Lesson, the students were asked to imagine and draw a time machine. Their drawings were scanned and uploaded by the educator to the blog. A blog post accompanied the drawings delineating the following: "Fifth graders draw a time machine! Below you can find your classmates drawings. Each student is requested to write a few words about his/her drawing. You can also comment on your classmates' drawings. We are all waiting to hear your opinions." For this post students showed minimum interest, mainly due to the lack of time.

Discussion

Blog Use

Blog was integrated as a tool at school and at home. There was no extensive use of the blog from home for educational purposes, even though the students reported using the Internet relatively often at home. Even if students did not highly use the blog; its educational potential was revealed, since blog exploitation facilitated the achievement of the lesson's learning objectives. It can be also supported that the blog was integrated as an educational tool on a satisfactory level/degree since it provided a platform for students to interact and discuss issues related to the subject under investigation, activated their imagination and finally helped to significantly achieve the learning goals set by the educator. Overall, the blog was well organized and designed. The effective and successful exploitation use of various blog's tools,

functions, and settings by the educator was observed and facilitated the learning process. For example, the posts uploaded by the educator were of different content, text, picture (student drawings) and video. The educator also employed various gadgets such as: voting (in order to perform the eighth post/exercises), calendar (for reminding students when and where the lessons will take place as well as when the exercises were due), blog archives.

Students

Students freely expressed their personal views, thoughts, and opinions; however, they did not comment on their classmates' posts. Unfortunately, the blog was not employed as a tool to promote collaboration and reflection. This result was kind of expected given the novice educator and student experience in blogging and the inexistence of educator's blog role and appearance. Additionally, it is supported that the design of the activities was problematic, since they did not clearly provide instructions and guidelines to students. There was limited discussion, interaction and dialogue among the students at the blog, something that did not happen through in-classroom activities (where the students were lively participated). Students' responses showed that they were able to freely express their personal opinions; however, they did not comment on their classmates' responses. Thus, the blog was not employed as a tool for promoting cooperation and reflective learning. Specifically, the teacher did not create the appropriate environment for students' interaction, dialogue and discussion through the blog. Moreover, not all students had access to computers and Internet at home. Finally, it was the very first time that such as tool (the blog) was used by both students and the teacher for educational purposes.

Educator

Given the above, it is suggested that educator's role is extremely important. Even though educator's overall presence was really influential, managing to develop a blended learning environment; it is important for a number of elements to be taken into consideration when designing and implementing blog-based activities integrated within a blended learning environment. The students needed more guidance, monitoring, assistance (promote interaction, debate, and dialogue) while working in an online environment. In order to effectively and successfully integrate blogs as educational tools within the teaching and learning process a number of factors need to be in place. First of all, the educator should have a greater presence and involvement within blog activity. The educator needs to directly lead and guide the blog activity. Specifically, the educator's participation at the blog for scaffolding, stimulation and motivation purposes considers being extremely important.

Having the same importance; specific and understandable instructions and guidelines regarding blog use and students' responsibilities and expectations is expected to be given to the students. For example, the educators need to make sure that when designing a blog and its posts (exercises), the following parameters are addressed: frequency and consistency of use, initiative to begin discussion, initiative to continue discussion, quality of responses, minimum number of posts and responses to classmates, deadlines, combination of blog and classroom activities; and provide relevant information to the subject under investigation through links and extra readings. The educator's role is important and crucial. His engagement and involvement in blog should be a continuously apparent while playing the role of the facilitator. The educator needs to review students' posts, comment on students' responses, ask questions, make observations, prompt and remind students to respond (Garrison & Arbaugh, 2007). Also, it is important to motivate students, even providing grading related motives.

One more important element is for the educator to highlight the importance of dialogue, discussion, interaction and interactivity, coexistence, and collaboration within a team, and finally the collaborative group result. The educator is responsible in organizing lesson plans and developing activities to achieve the above learning environments. It is also important that the educator organizes and develops well-planned activities which use effectively blog's features, functions, and settings. For example, blog activities are designed to be posted on the blog must have features that promote critical thinking, reflection, collaboration, dialogue, debate, expression of opinions, and interaction (Zawilinski, 2009). Finally, to effectively design blended learning environments; sufficient time for students to use the blog should be given, taking into account other parameters such as possession and use of computers and Internet access at home.

Conclusion

The possibility of incorporating the blog as an educational tool to a greater extent within the primary education is highly evident given the results of the current study. Additionally, the results of the study highlighted the employment of a blog as an educational tool in order to design and develop blended learning environments where Community of Inquiry is achieved. Specifically, the results revealed that both cognitive and social presence as well as teaching presence contributed to knowledge construction (Garrison & Vaughan, 2005). Nevertheless, the use of blog can be characterized as satisfactory given the limited time it was active and its partial use by the students. The current paper highlights the possibility of extensive blog integration as an educational tool in primary education taking into account various factors and suggests the development of a model that incorporates/explains the requirements of effective integration blog in educational practice based on the following parameters: teacher, student, blogs, and content/activities. Through this model, the role and interaction of the four parameters will be reflected and explained.

Finally, it is argued that the model of the blended community of inquiry is considered more suitable for primary education. Future research should focus on adapting the current model of community of inquiry, creating and weighting of a model to the characteristics of primary education.

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