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Innovating with Blogs in University Courses: a Qualitative Study

Abstract

This study is based on an eminently socio-constructivist and investigational paradigm. By making pedagogical use of blogs in the classroom, we aimed to determine whether students appreciate the usefulness both of this new social tool and of technology in general applied to education. Based on the use of blogs in several university subjects we designed a study and a total of 136 teacher-training students of the specialization courses of Infant and Primary Education participated in it. The data for the study were collected using a triangulation of techniques: face-to-face discussion sessions, email messages and blog messages. The conclusions reveal that blogs are easy to use, they are an important resource in educational settings, they encourage students to take on an active role, and they are a useful instrument for self-evaluation.

Key words: *e-learning, blog, computer-mediated communication, constructivist learning, online classroom.*

Introduction

Blog as a technological resource is normally used by a community of users who have an interest in certain common subjects. The individual in charge of the functioning of the blog, generally known as the *blogger*, poses questions and personal reflections which may cover any area of knowledge. In this respect, the blog is a digital resource in a new medium of social communication which is growing more and more rapidly each day. The Blogosphere, a term coined because of its

analogy with the concept of "public sphere", is becoming consolidated as a space for the exercise of public communication and freedom of expression (Barlow, 2007).

Blogs have increased in popularity in recent years, and cover all spheres of the Internet, including initiatives in the field of education (Baggetun, 2006). In the educational context, they are known as edublogs (education + blogs), i.e., blogs addressed to education. These blogs can be useful tools in the field of teaching since they may be adapted to all disciplines, levels and teaching methodologies (Lara, 2005).

Blogs cover a whole range of shared experiences, providing the student with reflections and contrasts of ideas (Bohórquez, 2008). They are appropriate and useful practices in the development of students' role as active participants and of their advanced learning skills, and in the promotion of learning communities (O'Donnell, 2006; Farmer, Yue y Brooks, 2008); they are, additionally, a tool for collaboration and communication (Achterman, 2006). Dickey (2004) and Wise (2005) point out that for students the elaboration of their personal blog can help them to construct their own learning and to establish social interrelation networks which can offset feelings of isolation habitually associated with tele-educational systems.

The use of blogs goes beyond the time-space limits of class teaching. It favours continuous assessment in teaching processes, and the incorporation of blogs in curricula offers the teacher the possibility of using new methodological strategies other than the traditional classroom lecture, such as discussions, problem-solving or case analyses, interviews with experts, the elaboration of group projects, the design of electronic portfolios, etc. (Salinas and Viticcioli, 2008; Cabero, Llorente, and Román, 2007; Cabero, López y Llorente, 2009). Blogs also enable the creation of repositories of educational digital materials for in-depth examination of the subject-matter and improved reflexive and meta-cognitive processes. Using blogs, therefore, enables teachers to better communicate with their students by using the language to which the students are accustomed.

The present study was carried out during the first semester of the academic year 2008-2009 with the students of New Technologies Applied to Education, in the third year of the Teaching Training Diploma in the specialization of Infant and Primary Education, with 4.5 credits, and of General Didactics, in the second year of the specialization of Infant Education, with 9 credits. These subjects are taught at the Faculty of Teacher Training of the University of Extremadura, in the city of Cáceres (Spain). Throughout the course, students are encouraged to learn to use weblogs as didactic resources in their training as future teachers, so that each student may become an active agent in the process of knowledge construction.

Thus, from the constructivist, comprehensive and critical viewpoints with regard to the process of design, development and evaluation of these telematic resources, students must learn to autonomously conduct relevant information searches, supported by various services and tools provided by the Internet: search engines, chats, forums, distribution lists, blogs, wikis, etc.

The initial programme of subjects consisted of several topics included in the teacher's blog: http://www.eloy3000.blogspot.com. The subjects were taught based on the topics and with practical sessions carried out in the computer room. In these practical classes the students learned to design and publish blogs of an educational nature, to handle Linex and Windows utilities, and to work with applications for the processing of texts, images and presentations with slides.

Additionally, from an integrated constructivist and investigational perspective, students were able to be totally creative and to assume the personal initiative of proposing the subject-matter which their blog would deal with.

In class one day the following exchange occurred:

Teacher: *What topics are we going to work on for our blog subject?*

Student 1: *Well, I don't know.*

Student 2: *Perhaps the topics could be related to Health Education, particularly on how to encourage good eating habits: not eating hamburgers, sweets, popcorn at the cinema , …*

Student 3: *In my opinion, we should focus the blog on New Technologies in the classroom. I think that it would be interesting for us as future teachers to participate in a blog like that, and to think about how children could benefit from these new technologies, not only for their education but also in their daily lives […]*

Teacher: *Well, I don't know either. Send your proposals to the blog address http://sugerencias-didacticas.blogspot.com/and we'll decide on the topics for the subject based on demand.*

In the end the students themselves decided that the blog should have as its main theme "Introduction to Communication and Information Technologies (CITs) in the Classroom". The activities carried out with blogs received an evaluation of between 10 and 20% of the final grade of the subjects.

In the setting of these characteristics, then, an investigation study was designed with the following main objectives:

- To determine how students interpret the use of CITs in the classroom
- To determine how students perceive the introduction of blogs as an educational resource

Methodology

The methodology used in this study was of a qualitative and descriptive nature. For the qualitative analysis, we took into account the fact that it is the assessor who must attribute meanings, prepare results, and draw conclusions. Recording of data may also be made in various ways, but the qualitative assessor must finally transcribe all the information in written form before working on it. We considered too that the qualitative analysis of data should not be understood as linear, but rather as a cyclical process, at times simultaneous, and always interactive.

The main methodological characteristics of the study are presented in Table 1, with a more detailed description in the following paragraphs:

Table 1: Main methodological characteristics of the study

Moment of Data Collection	Instruments	Participants
Beginning of training	– First face-to-face session	– 2nd year students of Infant Education in the subject of General Didactics – 3rd year students of Infant Education in the subject of New Technologies – 3rd year students of Primary Education in the subject of New Technologies
During training	– Second face-to-face session – Email messages	
End of training	– Third face-to-face session – Messages sent to teacher's edublog	

Triangulation of subjects was made in the selection of the participants in the study, so that 136 students took part, distributed in the following way:
- Thirty 2nd year students of Infant Education in the subject of General Didactics
- Sixty four 3rd year students of Infant Education in the subject of New Technologies
- Forty two 3rd year students of Primary Education in the subject of New Technologies

The research data were similarly obtained by means of a triangulation technique. This kind of technique is frequently used in qualitative investigations to ensure reliability; in fact, as Lacy and Luff (2001) point out, when triangulation is used, the contradictions and differences among the data selected lead to more in-depth analyses, until meaning is found for what has occurred. The techniques used in the triangulation were:
- Students' oral reflections expressed in 3 face-to-face sessions
- Email messages sent between teacher/student
- Messages sent to teacher's edublog

Data collection was made at three main moments in the study:

Moment 1, at the beginning of student training:

- First face-to-face session: at the beginning of the academic year a two-hour session was devoted to group discussion for students to air their ideas relating to CITs and the "educational blog" as a digital resource.

Moment 2, during training:

- Second face-to-face session. This second session was conducted to explain the most significant characteristics of blogs in educational contexts and to teach each student how to create, edit and publish a blog. The students were divided into two groups so that each student had a computer. The blog was created using the free application "Blogger" for publishing blogs, in its Spanish version, and by using certain functions such as addition of text, images, videos or creation of links to a blog. At this point the students were assessed on the knowledge acquired on CITs and Blogs.
- Email messages sent between teacher/student: at this point the use of electronic mail as a means of communication between teacher and student was fundamental; the teacher had the chance to observe doubts, preconceptions, reflections, etc. that students had concerning the working tools.

Moment 3, end of training:

- Third face-to-face session. This final session was held around the middle of January, 2009, to assess the work done through a class assembly.
- Messages sent to teacher's edublog: students were urged to participate in the teacher's edublog to offer their opinions on the blog as a teaching instrument.

Results

In order to analyze the data obtained, the total amount of information gathered was transcribed. When this was done, an in-depth reading was made and all the recorded information was categorized for the analysis of the content and organized in the following phases (Bardin, 1986; Bogdan & Biklen, 1992):

Step 1: Identification of units of information: codification: during this first phase, global codification of data was carried out by means of identification of units of information or "*segments of content*" (Bardin, 1986), as base units, which enabled us to have a precise description of the characteristics pertinent to the content.

Step 2: Categorization: once the units of analysis were determined, they were ordered and organized according to the system of categories designed for the

research project. In this way all the available information was structured and systematized in each of the defined dimensions and categories.

Step 3: Interpretation and inference: finally, the process of data analysis was completed with a third stage in which the different categorized units of information were interpreted. Once the data were thus codified, tabulation was carried out, i.e., data were ordered systematically in tables and presented graphically to facilitate the following phase, which was interpretation and explanation of the results.

With regard to the results obtained, we will first assess the information pertaining to the use of CITs in the classroom, and secondly we will examine the data on blogs.

Data on the use of CITs in the classroom

Table 2 shows the data obtained for this section; it presents the categories found, and the frequency with which each of the three groups of students referred to each of the categories.

**Table 2:** Opinions by the three groups of students on the introduction of CITs

CATEGORIES	FREQUENCY			
	2nd year students of Infant Education in the subject of General Didactics	3rd year students of Infant Education in the subject of New Technologies	3rd year students of Primary Education in the subject of New Technologies	Total
Blogs are a very important resource in Ed.	30	64	36	130
Blogs enhance motivation	15	34	12	61
Blogs are useful as a repository of activities	12	34	0	46
Blogs encourage collaborative learning	10	22	4	36
Blogs aid technological literacy	9	22	0	31
Blogs make more training necessary for teachers	9	17	11	37
Blogs require better infrastructure	6	9	0	15
Blogs are an aid to teaching	5	16	14	35
Blogs help in changing the traditional teaching methodology	3	19	5	27
Blogs make better management of technological resources necessary	0	0	5	5
TOTAL	99	237	87	423

With regards to the use CITs, then, we highlight the fact that the great majority of the students of the three subjects (General Didactics in Infant Education and New Technologies Applied to Education in Infant Education and in Primary Education) (f=130) believe that the introduction of CITs in the classroom is a very important and interesting resource in educational contexts and enhances motivation (f=61). This opinion was expressed by the students in the three face-to-face sessions, and in the messages sent both by email and to the teacher's edublog. The following is an example of this opinion expressed by one student: *"From my point of view, the blog is an interesting medium and one that anyone can gain access to without any problem. I can use the blog to consult other teachers and to try to resolve any complicated question that crops up. This also helps a lot of other people. I think it is a step forward as far as new class activities go, and helps to motivate students by avoiding the monotony of the text-book"* (3rd year Primary Education student in the second face-to-face session).

Students also gave the opinion that the integration of CITs in the classroom favours collaborative learning (f=36), it serves as a support to teaching (f=35), and it helps in changing from traditional teaching methodology (f=27). Students of Infant Education consider that the use of CITs in the infant classroom helps in the elaboration of repositories of didactic activities (f=46) and in technological literacy (f=21) (c.f. Table 2 and Graphs 1, 2 and 3).

With regard to improvements, the students from the three diploma courses noted that teachers need more training in CITs (f=37) and only in the Infant Education specialization did they suggest that better technological infrastructure is required

Figure 1: Opinions of the 2nd year Infant Education students on the introduction of CITs in General Didactics
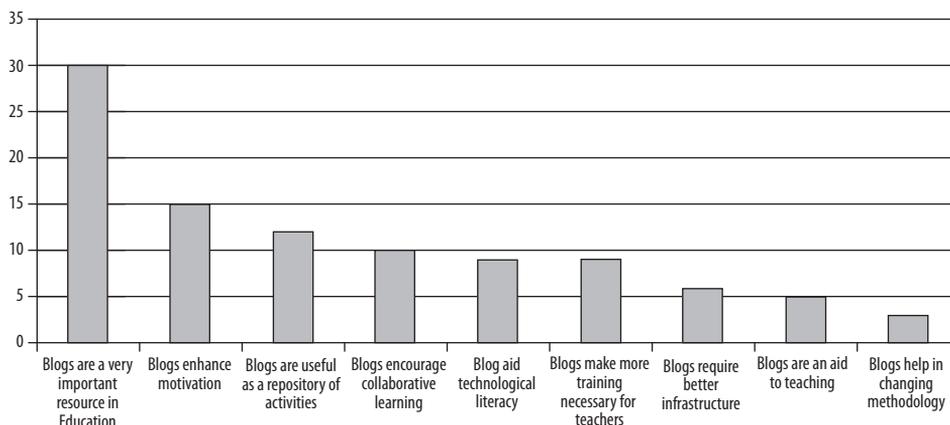
(f=15). The Primary Education students, on the other hand, felt that there is a need for better management of technological resources (f=5).

Figure 2: Opinions of the 3rd year Infant Education students on the introduction of CITs in the subject New Technologies
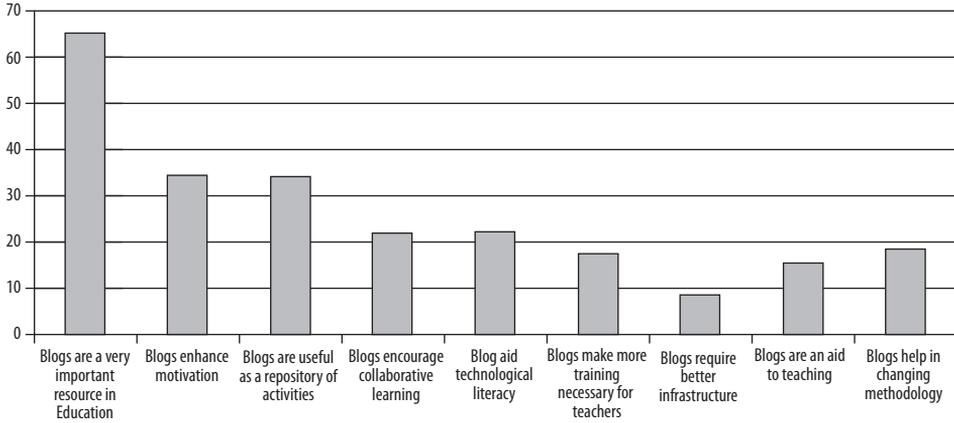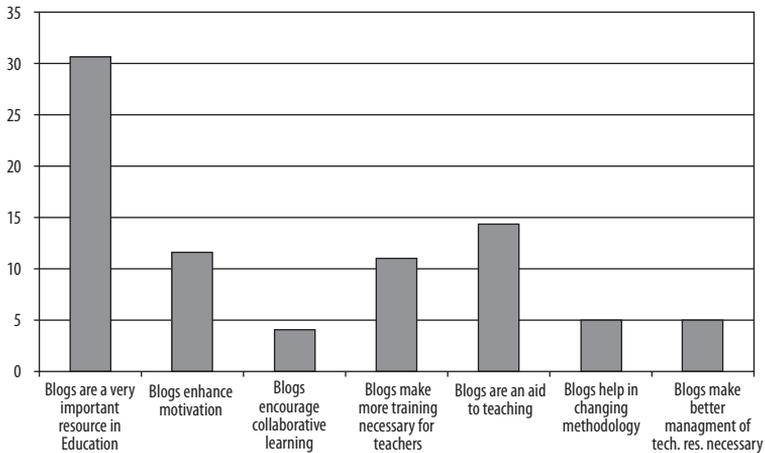

Figure 3: Opinions of the 3rd year Primary Education students on the introduction of CITs in the subject New Technologies

### Data on the use of Blogs in the classroom

With regard to the use of blogs in the classroom, the opinions expressed by the students in the face-to-face sessions and from the messages sent by email and to the teachers' edublog were codified. A total of 160 valid contributions were made by

the three groups of students under study (c.f. Table 3 and Graph 4). In this section we preferred to unify the opinions of the three groups of participants into a single value, since we considered that the contributions made by each of the three groups were not sufficiently differentiated for them to be presented separately.

Table 3: Opinions expressed by the three groups of participants on work done with blogs

Categories	Frequency	Percentage
Blog is an important and useful didactic resource	42	24.85%
Blog is a tool of communication	38	22.49%
Blog is a repository of activities	32	18.93%
Blog encourages active student participation	21	12.43%
Blog motivates students	14	8.28%
Blog aids technological literacy	13	7.69%
Blog is easy to use	6	3.55%
Blog is an instrument of evaluation of teachers' methods	2	1.18%
Blog can be used at all educational levels	1	0.59%
Total:	169	100.00%

Figure 4: Opinions expressed by the three groups of participants on work done with blogs
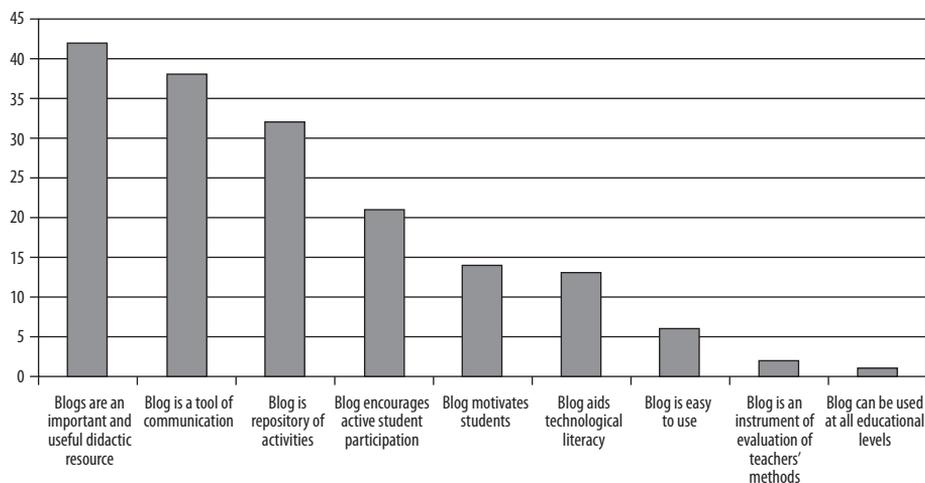
The quantitative analysis of the data relating to the opinions on blogs revealed that the majority of the students (42 out of 43) (f=42) consider that the blogs are an interesting, positive, important, and useful resource in the educational context.

One student, for example, stated the following: *"In my opinion, the blog is a very positive and useful resource for the infant education classroom. Not only can it be used in the classroom, but it is also a means of communication with parents. We can use it to write to families and inform them of anything which occurs in the centre or class."* (Message from a 3rd year Infant Education student sent to a teacher by email during training.)

It is worth noting, too, that this didactic resource can be used as a means of communication for the members of the educational community (f=38), not only between teachers and students, but also among classmates, as this student points out:

"I think that the use of blogs in primary school classrooms is an interesting, original and entertaining resource for children of this age. It enables them to learn to use new technology: they can participate, give and share opinions with a number of classmates, and at the same time create in an original manner their own information spaces". (Message from a 3rd year Primary Education student sent to a teacher's Edublog on completing training).

Blogs were also considered to be useful in the creation of repositories of hyper-medium educational materials (f=32), they encourage an active role among students in the construction of new learning methods (f=21), and they are a motivating force in training processes (f=14). Their possible use as an instrument of technological literacy in school classrooms (f=13) is also worth noting.

Further observations refer to the ease with which blogs can be used to edit and publish documents on the web; opinions in this respect were received by email, expressed during the final face-to-face session in January 2009, and commented on in messages sent to the blog regarding blog work (f=6). The following statements exemplify this view:

I found it very easy to set up. It is a good way of keeping contact with my classmates using new technology." (3rd year student of Primary Education at the third face-to-face session.)

In my view, setting up a blog is easy, although I thought it would be quite difficult. New technology and I don't always get along together, but I found it enjoyable." (3rd year student of Primary Education in an edublog message).

Finally, blogs can be used as an instrument of evaluation of teachers' methods (f=2) and may be used at all levels and stages of education (f=1), corroborating, in this respect, Lara's (2005) proposal.

Conclusions

At present, the use of CITs is a priority objective in the training process of today's new generation of students (Oblinger y Oblinger, 2005). Lee and Gaffney (2008) show clearly and concisely how schools can integrate digital technologies creatively and wisely in order to enliven teaching and support student learning. From this perspective, the main purpose of our investigation was for students to become acquainted with and use CITs, blogs in particular, in their training as teachers. As the results of the study show, this aim has been achieved to a great extent.

The results obtained favour the use of blogs in educational settings: they are useful for encouraging students to take an active role in their studies, they enhance higher level learning skills, and they help to establish communities of learning (O'Donnell 2006). In fact, as Yuksel (2009) also confirms, blogs may be used effectively as a supportive instructional tool in the learning environment.

The inference that blogs are easy to use, moreover, is clear from the messages sent by email to teachers, from the opinions expressed in the final session of the assembly in January 2009, and from the comments published in the blog relating to work done on the blog (f=6). In this respect our conclusions are similar to those of previous studies (Tekinarslan, 2008).

We are also aware that we have partially achieved one of the objectives set out in the elaboration of this study, i.e. that students conduct search for relevant information autonomously. Previously, most of them had restricted their consultations to the links provided by a single search engine, Google, as they themselves reported at the final session held in January 2009. They had largely avoided using the more effective university resources, such as consulting international library databases, joining forums for the exchange of information, or analyzing social software applications or Web 2.0.

Traditionally, university teaching was based on a methodological model which focuses on the teacher, with the emphasis on the transmission of contents and the reproduction of these by the student, the master class, and individual work. Teaching through CITs, specifically as in our study with blogs, brings about a number of changes which break away from this model, and at the same time enhance the quality of university teaching.

In a society in which professional knowledge is complex and unstable, teaching preferred by students should not be fixed in an obsolete model where the student is a receptive agent of information supplied by teachers or text-books, but rather it should be based on educational actions related to the use, selection, and organization of information (Salinas and Viticcioli, 2008; Alonso y Blázquez, 2009). These

models should focus on student interaction with social networks of knowledge and formative experience. It is necessary, therefore, to educate in such a way that individuals participate more actively in their interaction with those media which have a growing influence on today's society, rather than merely playing the receptive role which has until now been assigned to them (Aguaded and Amor, 2001; Aguaded and Pérez, 2007).

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