Assisting Language Learning with New Technologies: A Case of Spanish Degrees Facing a European Educational Change Process

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Abstract

One of the biggest challenges European countries have lately faced is *The Bologna Process* which consists of a series of ministerial agreements between European countries designed to ensure comparability in the standards and quality of higher education qualifications. The resulting European Higher Education Area (EHEA) propelled a sudden implementation of a new organizational approach into the Spanish academic system in 2008. This paper traces the evolution of lectures in English for Specific Purposes (ESP) over three semesters in this changing teaching environment in the Health Science and Medicine Faculties of the University of Zaragoza (Spain). The aim of this paper is to assess the value, among students, of the use of social media and virtual tools in a strictly academic context. The implementation of change in instructional design was necessary due to the limitations in the existing teaching practices. Consequently, the teacher's and students' experiences over each of the three semesters led to the implementation of Microsoft *MSN Messenger*, a course blog and a *Facebook* profile. Data from this contribution to action research suggest that students' opinions and perceptions of the use of personally oriented technology in the language learning process were positive in my university academic context.

Keywords: Teaching practice, technology, ICT, English for Specific Purposes, educational European change in higher education.

Introduction

This paper traces the evolution of lectures in English for Specific Purposes (ESP) over three semesters in a changing teaching environment in the Health Science and Medicine Faculties of the University of Zaragoza (Spain). From the year 2000 onward, Spain's academic and educational institutions underwent a significant process of transformation. This was due to the Bologna declaration of 1999, which aimed to ensure comparability in the standards and quality of higher education qualifications among European countries. Degree courses, modules and syllabi were redesigned, and as of 2008, Spanish universities restructured their approach. Existing modules were discarded, and students who had still to finish pre-declaration degree courses were obliged to rapidly conclude their studies. Failure would have led to commencement of post-declaration modules and non-graduation. Amid this process, the practices for teaching and learning began to include social media and virtual tools. They were seen as a way of reinforcing language learning, of improving communication among teachers and undergraduates and of helping users keep up to date in a fast-changing European scenario. For this author, new technologies were used to engage with pre-declaration students who could not follow up the English courses due to the fact that they were registered in many subjects so as to conclude their studies before the post-declaration modules started and to complement teaching along that educational change. Survey results and class observation aided this study to explore the alignment of Spain's system with the process of change affecting its universities.

The aim of this paper is to assess the value, among students, of the use of social media and virtual tools in a strictly academic context. The implementation of change in instructional design was necessary due to the limitations in the existing teaching practices. Consequently, the teacher's and students' experiences over each of the three semesters led to the implementation of Microsoft *MSN Messenger* (cienciassaludingles@hotmail.es), a course education blog (http://medicalenglishinuse.blogspot.com) and a *Facebook* profile (www.facebook.com/cienciassaludingles). Data from this contribution to action research suggest that students' opinions and perceptions of the use of personally oriented technology and social media in the language learning process were positive in my university academic and educational context.

For non-European readers it should be explained here that *The Bologna Process* is a series of ministerial meetings and agreements between European countries designed to ensure comparability in the standards and quality of higher education qualifications. The Bologna declaration led to the European Higher Education Area (EHEA) under the Lisbon Recognition Convention (http://www.ehea.info). It is named after the place where it was proposed, the University of Bologna, and the signing of the Bologna declaration by Education Ministers from 29 European countries in 1999 was a further step toward European integration. Spain signed this declaration in 1999 but it was not until 2008 that the country's academic teaching and institutional organization started to change as Ortega & Hassan (2013) also explain in their study. Among many academics, Torregrosa *et al.* (2014) emphasize that the sudden implementation of a new organizational approach into the Spanish academic system in 2008 was controversial, above all, among degree students. As regards teaching and learning styles in the pre-declaration academic culture in Spanish universities it should be noted that unlike English speaking countries, Spanish higher education institutions were conservative and even outdated. The teaching methods did not include group work, work-based learning and work placement, e-learning, technology or, for instance, approaches as blended learning. Our universities only had lectures which delivered a lot of content. Learning was not interactive since students were expected to listen and take notes, and thus, no discussion was expected. There were no seminars or tutorials yet students could attend lecturers' office time since lecturers were supposed to dedicate six hours a week to answer students' individual inquiries. In some courses, further contents were usually gathered in a single course book. As far as general degrees' organization, former degrees were phased out (2009, 2010 and 2011), meaning that pre-declaration students had to pass their remaining subjects or register in ones not included in their pre-Bologna study programs, thereby delaying graduation. Therefore, there was a range of different personal situations among students. There were students who registered in all the remaining subjects so as to finish their degrees before the Bologna plan was fully implanted and due to the number of courses they were enrolled in**,** they were unable to attend all the lectures. There were also older students studying their degrees at a slower pace, as part-time students, and they too realized they had to register in all the remaining courses. Finally, there were final-year students due to finish their degrees that academic year.

Background

Nowadays, it is difficult to conceive of everyday life without technology or the Internet. The importance of the World Wide Web, not only in our professional and personal routines, but also in essential human processes such as *learning,* is undeniable. Thus, Information and Communication Technologies (ICT) literacy is fundamental in our modern technological society, especially for higher education students. Teachers' associations such as *English*

Teachers Association NSW believe that if we are to enable students to be literate lifelong learners and global citizens of the 21ˢᵗ century, then ICT must be successfully integrated into both the English curriculum and English pedagogical practice (Lara, 2004). Interest in the role of ICT in language learning has increased in recent decades (i.e. Johnson, 1991; Dickinson, 1998; Moseley, Higgigs, Newton & Stout, 1999; Gee, 2003) due first, to its role in enhancing teaching and learning and second, to the parallel increase in research into the Internet and its influence on language and genre evolution (c.f. Orlikowski & Yates, 1994; Fortanet, Palmer & Posteguillo*, 1999; Crowston & Williams, 2000; Crystal, 2001; Herring, 2004; Thurlow & Mroczek, 2011; Berkenkotter, 2012; Campagna, Garzone, Ilie & Rowley-Jolivet, 2012 or Herrando-Rodrigo, 2012). ICT is now firmly established as a professional resource for teachers. It not only supports the preparation and delivery of lectures but also provides a valuable supply of authentic material. ICT provides students with opportunities to communicate more effectively and develop literacy skills. It also encourages autonomous and collaborative learning.

Recent research such as Sardegna and Yu's (2015) study, has cast light onto how computer-assisted language learning (CALL) can be integrated into ESP teaching. And there is further research (Stockwell, 2012) in which it has been shown language teacher development programs ought to contain components which aid the acquisition of skills in new technologies. Recent evidence suggests that *Web Tools* have become essential in establishing a teaching-learning atmosphere from a constructivist perspective (c.f. Lara, 2004; Dickey, 2004; Wise, 2005; Richardson, 2010). From their early childhood, our students have been exposed to web 2.0 spaces and as Gértrudix and Ballesteros (2014) point out, it requires student collaboration and interaction for full advantage to be taken of these spaces.

The concept of virtual spaces (blogs, Wikis, social networks, apps, etc.) might seem threatening to us, since we, in the teaching profession, are frequently digital immigrants while our students are innate. Prensky (2001) wisely indicates that our students are no longer the people any country's educational system was designed to teach. He points out that "our students have spent their entire lives surrounded by and using computers, videogames, digital music players, video cams, cell phones, and all the other toys and tools of the digital age" (2001: 1). This ubiquitous environment and the way students interact make a difference in the way they process information and, therefore, in the way they eventually learn. Prensky's argument relies on the fact that while today's students are all *digital natives*—that is "native speakers" of the digital language of computers, video games and the Internet—we, in the teaching profession, are *digital immigrants*. That was the case in Spain in the pre-Bolognia academic context. Needless to say, that eight years later, instructors are more comfortable with technology since the new system has driven us to use, for instance, Moodle platforms to organise course contents or digital domains to register students' grades. Thus, although some researchers question Prensky's argument about the different digital command between learners and teachers (Margaryan, Littlejohn, & Vojt, 2011; Wang, Hsu, Campbell, Coster, & Longhurst, 2014) and discrepancy has arisen about how to settle these boundaries between both groups, this research agrees with Prensky's approach based on our academic context at the time the study was conducted. On the other hand, it has also been criticised how new approaches to teaching such as Blended or Flipped learning are not successfully bridging the broader community of language teachers and learners and CALL experts and practitioners due to the lack of systematic investigation into the factors that shape these new learning methods (Neumeier, 2005). Although it is not the purpose of this paper to carry out a systematic investigation, I attempt to use some of the social and virtual tools our students use for their everyday social interaction to complement teaching along that educational change.

Within these virtual spaces, social networking sites have become increasingly popular, as Bosch (2009) highlights in her thorough investigation into the use of online social networking in teaching. The effectiveness of online tools in teaching, encouraging for instance, group discussions, contrasts with some factual, rather than potential, limitations or risks. Students' personal information (Torgeson, 2006) is often shown with an apparent lack for privacy on students' own behalf (Kosik, 2007). Moreover, networked computers or smartphones to access blogs, messaging programs, or *Facebook* have no additional cost to students assuming that they already pay for or have access to Internet-enabled devices. However, users pay for the service by supplying their private information, which Facebook then uses to advertise specific webs related to the user's interests, other Facebook profiles, clothes, etc.

Nonetheless, much previous research has focused on the benefits of the ability of social online networking tools to enhance social connectivity and general communication among students and teachers (Lampe, Ellison & Steinfeld, 2006; Stutzman, 2008), teaching and learning (Bosch, 2009) and lecturer engagement with students (Boyd, 2008). Therefore, since the aim of this research was to explore the alignment of Spain's system with the process of change affecting its universities in the second decade of this century, then social networking, or what this paper has conceptualized as new technology, is an adequate choice for the implementation of my teaching practices.

Firstly, this paper will give an overview of three different teaching projects or experiences (*MSN Messenger*, education Blog and *Facebook*) based on ICT practices in medical discourse learning implemented in the Faculties of Health Science and Medicine (University of Zaragoza, Spain). The evolution over three semesters of instructionally designed methods was aligned with my action research. Secondly, this paper will attempt to show how good practices yielded highly positive results among both the students and teacher in the courses. In addition, the detailed description provided displays how these good practices, based on new technologies, can be carried out, replicated and hence, validated in ESP classrooms around the world and in other language acquisition settings.

Methods

The range of academic situations among students made me urge them to take an interest in English courses through the personal social technology which had become part of everyday life. In my view, the use of social media technology would help them keep up to date with course content and be in contact with English in the learning environment.

Therefore, for three consecutive academic years (from 2009 to 2012) I conducted action research with participants enrolled in degree courses in the Faculties of Health Science (Nursing, Physiotherapy and Occupational Therapy) and Medicine at the University of Zaragoza (Spain).

Action Research

It was Kurt Lewin, who almost 60 years ago, coined the term *action research* to describe either research initiated to solve an immediate problem or a reflective process of progressive problem solving led by individuals working with others in teams or as part of a community of practice to improve the way they address issues and solve problems. There are two types of action

research: participatory action research and practical action research. The methodology of this study aligns with research such as the one conducted by Denscombe (2010) and supports the view that the strategy underlying action research is to solve a particular problem and to produce best practice guidelines. Previous studies report that action research involves actively participating in a change situation, often via an existing organization, whilst simultaneously conducting research. Action research can also be undertaken by larger organizations or institutions, assisted or guided by professional researchers, with the aim of improving their strategies, practices and knowledge of the environments in which they work. As designers, researchers work with others to propose a new course of action to help their community improve its work practices (c.f. Lewin, 1946; Burns, 2007; Pine, 2008; Denscombe, 2010).

Research Design

The aim of the three practices was to enhance medical discourse learning by using computer-mediated tools. In addition, I also thought that through this study it could be ascertained whether students valued personal technologies when used in Spain's academic context. Students' perceptions and opinions and the teacher's experience were obtained at the end of each practice by means of questionnaires and a by final seminar attended voluntarily. These follow-up sessions were not recorded yet notes were taken. In addition, I kept a research journal to gather how class was going in each course and what should be changed, implemented or kept for the future. The evolution of this instructional design, the participants and the procedures are described below. It should be mentioned here that for the sake of clarity in action research, interpretation of results should be introduced and discussed straight away. Therefore, this paper includes neither a results section nor a discussion section. It does, however, include a discussion of findings section.

Participants.

Students were offered the opportunity to participate voluntarily in three practices aimed at solving the phasing out of their study programs and the ensuing problems while acquiring medical discourse. N is used in this study to refer to the number of students registered in each English course and n is used to refer to the number of participants. No extra grades were given to students who participated in these projects since the aim was to assist students with the technological social tools. Students were not asked to give consent since by Spanish law, participants in any survey who are over 18 are automatically in accordance with the survey-based approach s/he may be taking part in.

Implementation of Technologies: *Microsoft MSN Messenger*

It is an instant messaging and presence system developed by Microsoft for use with its MSN Messenger software. The service allows anyone with a Microsoft account to sign in and communicate in real time with other people who are signed in as well. Moreover, it also allows files exchange such as written documents, audios or videos.

The first teaching practice was implemented in three ESP subjects at the Faculty of Health Science: *Advanced Technical English for Nursing, Advanced technical English for Physiotherapy* and *Advanced Technical English for Occupational Therapy*. To gather opinions and perceptions at the end of the three courses, students were asked to participate in a brief

survey-based study and fill in a questionnaire (Appendix 1), which was distributed to all my students on the day of the final exam. Only students who participated in the project filled in the questionnaire (n=64 students) that is 89% of overall student registration (N=72 students). As for their personal variables, it should be said that 80% of students who participated in the survey were females. There was low male enrolment in the project and the age range was from 20 to 55 years old. After the final grades were published on the students' notice board, students were invited to participate in a voluntary seminar to share the teacher's and the students' experiences on the use of the tool.

Education blog

A (Web)blog platform is a discussion or informational website published on the World Wide Web consisting of discrete, often informal diary-style text entries ("posts"). Posts are typically displayed in reverse chronological order, so that the most recent post appears first, at the top of the web page. Education blogs provide commentary on content related to educational issues. Blogs combine text, digital images, and links to other blogs, web pages, and other media related to its topic.

The second teaching practice was implemented in an ESP course at the Faculty of Medicine: *Inglés Médico* (Medical English). To assess and evaluate the benefits of the education blog in this course, students were asked to participate in a brief survey-based study prior to their final exam (Appendix 2). Fifty-five students participated in this teaching practice and (n=55). After the final grades were published on the students' notice board, students were invited to participate in a voluntary seminar to share the teacher's and the students' experiences on the use of the tool.

Facebook profile

Facebook is an online social media and social networking service. It may be accessed by most Internet-enabled devices. After registering to use the site, users can create a user profile indicating their name, occupation, schools attended and so on. Users can add other users as "friends", exchange messages, post status updates and digital photos, share digital videos and links, use various software applications ("apps"), and receive notifications when others update their profiles or make posts. Additionally, users may join common-interest user groups organized by workplace, school, hobbies or other topics, and categorize their friends into lists such as "People From Work" or "Close Friends".

The third teaching practice was implemented in an ESP course in the Faculty of Medicine. To assess and evaluate the benefits of the course *Facebook* profile in the course *Technical English for Medicine*, students were asked to participate in a brief survey-based study (Appendix 3). Only students who participated in this teaching and learning initiative and used the course *Facebook* to interact with the teacher's posts answered the questionnaire (n=15 students). All participants were 21 years old or over and they were enrolled in different years of the degree of Medicine (from 3rd year to 6th year). After the final grades were published on the students' notice board, I invited all my students to participate in a voluntary seminar to share the teacher's and the students' experiences on the use of the tool.

Procedures

As mentioned in the previous section, it was made clear in each course that participating in the practices would give students no extra grades since the tools were used to help them perform more efficiently in subjects.

The first practice was carried out in the academic year 2009-2010. A system of teletutorials based on Messenger (*MSN*) by Microsoft (cienciassaludingles@hotmail.es) was created for the three courses for which I was responsible (*Advanced Technical English for Nursing, Advanced Technical English for Physiotherapy* and *Advanced Technical English for Occupational Therapy*). These 3rd year degree courses were taught in the Faculty of Health Science and were shortly to be removed from the study program, as explained in the Introduction. They consisted of 60 teaching hours and were taught in the first term of that academic year. I therefore established a system of one-to-one virtual tutorials in addition to my customary office hours to facilitate teacher-student communication as an extra resource or measure. Moreover, students who could neither come to class nor attend the lecturer's office hours could opt for this resource. Thus, thanks to *MSN Messenger,* the teacher and students were able to interact with speed and ease provided both were connected to *Hotmail*.

Through this medium, files, images and different items of information could be shared and it became possible to converse and solve problems in real time with individuals and groups. To establish interconnectivity, which was intended to foster collaborative, significant and reflective learning, the technical requirement was to download *MSN Messenger* and connect to the course MSN account at the address: cienciassaludingles@hotmail.es. As explained in the following section, the teacher's and the students' experience led me to create an *education blog*.

The second experience this paper aims to share took place the following academic year 2010-2011. As mentioned above, it was observed that the previous teaching practice helped greatly to encourage communication and, therefore, clarify doubts or explain concepts in real time. *Messenger* was the optimum tool for rapid and effective communication between teacher and students and from any individual student to the teacher. However, the content of the course could not be developed any further. In the voluntary seminars and class room observation it was observed that students preferred an electronic domain where syllabi and contents were orderly displayed and not shown at random depending on students' difficulties explain on depth arbitrarily on *Messenger*. Hence, an education blog was used to overcome *Messenger's* limitation. *http://medicalenglishinuse.blogspot.com* was created for the course I was teaching at the Faculty of Medicine: *Ingles Médico* (Medical English). This course consisted of 60 teaching hours and was taught in the second term of that academic year. I took a 50-hour on-line course on how to create educational blogs in an attempt to use this tool to reinforce language acquisition and engage with my students. In a similar fashion to Caturla (2008), I aimed to combine ICT tools with linguistic competence acquisition and introduce students to self-access exercises and news items related to the subject and course content. Data gathered in the previous course seminar, surveys and class room observation indicated that students did fully enjoyed being obliged to visit the blog twice a week. The limitations found, according to the teacher's and students' experiences, led me to the implementation of the third instructional design which apparently was less time consuming for students.

So it was the very limitations of the second teaching experience that gave rise to practice three. I was seeking a system that could automatically warn students about new course input in their social networks routine. Hence, *Facebook* seemed able to 'disseminate' course content, events and issues in a natural, automatic and rapid way. So in the second semester of the academic year 2011-12, I implemented www.facebook.com/cienciassaludingles in *Inglés técnico para*

medicina (Technical English for Medicine). This subject consisted of 60 teaching hours. It was an optional subject offered in the final year of the pre-declaration degree in Medicine, which no longer provided in-class teaching. Students were encouraged to use the course *Facebook* and add the subject contact to the network option: 'my list of friends'. Thus, just by refreshing their own wall on *Facebook,* students were automatically updated with the course subject content, advice, events, and so forth. It could be suggested that *Facebook* acts as a catalyst for all the former resources used in this attempt at boosting communication, enhancing language acquisition through the use of technology and ICT.

Discussion of Findings

The rapid evolution and versatility of these social technologies inspired my interest in these tools and, above all, their capability to enhance medical discourse acquisition when Spanish universities had to align with a process or rapid educational change. That made students register in many different courses to rapidly conclude their studies before the post-Bologna modules were established. Using these technologies aimed to keep in contact with all the students, including those who could not attend lectures regularly due to their busy university schedules. This section aims to show how the teaching-learning process was positively valued. Gértudrix and Ballesteros (2014) argue that ICT are meant to be valuable tools for learning at any stage or cognitive development of students' teaching-learning process. Therefore, these tools were implemented to help students with medical discourse acquisition and in keeping up to date in the course, as well as encouraging social communication. It must also be emphasized here that the digital mode used by these practices plays a crucial role in the development of the project, the conclusions drawn and the ensuing limitations of this first incursion into ICT.

Messenger

At the time this project was designed, research under way with undergraduates in different locations (c.f. Smith, 2003; Smith & Gorsuch, 2004; Zalanowski, 2007) suggested that *Messenger* was beginning to shape our views on computer-mediated communication. *Messenger* (*MSN)* as a real time communication system seemed to adequately fulfill my teaching necessities since students were familiar with such technology. Its wide range of features (e.g. image and file sharing) enabled it to host most of their social exchanges. In addition, I also thought that this social tool could reinforce the teaching-learning process by supplying extra materials and guidelines even though some students could not participate in the one-to-one class routine. Apart from encouraging communication, *Messenger* also helped to clarify and consolidate the content of the lessons.

Following the trend set in recent surveys about "on line" tools for teaching language (Sprenger, 2010), I started out by creating my own student contact list. The Hotmail address was distributed in class and shown on the department notice board so as to disseminate the initiative. Once students contacted the teacher and the contact list was established, students were told about the possibilities of the asynchronous application *MSN Messenger*. We could have real-time conversations, share video and audio files with course information, exchange exercise keys and corrections synchronously, and create a social network. Above all, this flow of communication and accessibility provided security and guidance to all my students and to those who could not attend either classes or the teacher's office time. Finally, once a week, group chat comments on class content were posted, thereby allowing students to make comments and

suggestions. That was considered to be particularly useful by participants, as indicated in their answers.

Regarding the overall figures of the participants in the study (N=72), 11% of students registered in the three subjects did not participate in this teaching practice. These students neither came to tutorials nor contacted the teachers during term-time. Participation from each degree was diverse. Of the 64 students who participated in this project, 48% belonged to Nursing, 16% Physiotherapy and 36% Occupational Therapy.

As for students' evaluation of the project, 96% (62 students) considered this practice useful given the academic setting in which it took place. Students were asked in what way they considered this experience useful in fostering student-teacher communication and in enhancing course content follow-up. Their answers were positive, as shown in Figure 1. Twenty students found this practice very appropriate, 41 students found it appropriate and 3 students claimed that the practice was not very appropriate:

Figure 1. Students' perception of the appropriateness of this project in enhancing communication and course follow-up.
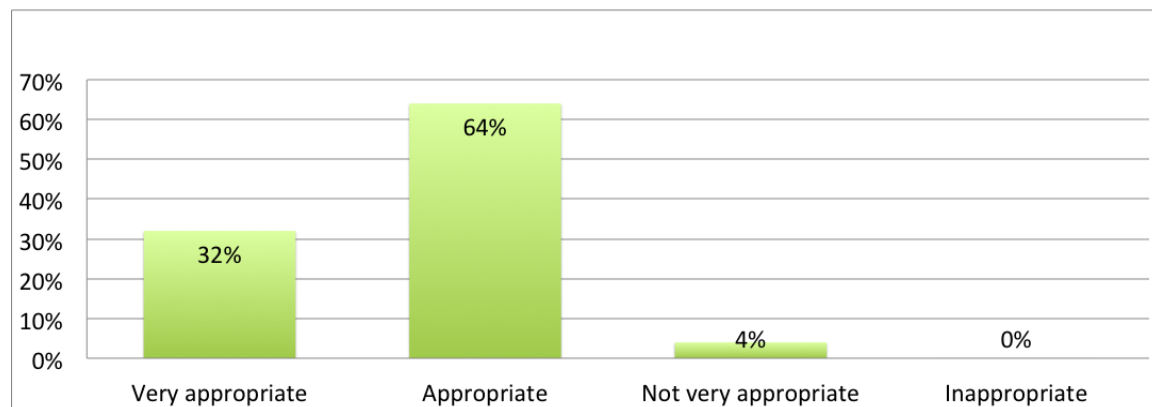
Ninety-six per cent of my students considered that this practice was not detrimental for one-to-one supervision and guidance or mentoring since the new digital social context could lead students to limit personal interaction. All the participants agreed that the use of this tool enhanced the acquisition of linguistic competence since they at all times had to formulate their messages in English, thus bringing them into contact with the language in different ways. This, in their view, was a clear motivating factor.

The overall grade students gave to this project was 9.08 out of 10. All the students rated this initiative with a minimum of 7 out of 10. Sixteen per cent of the students gave this project 9 out of 10 and 64% of students rated this practice with 10 out of 10.

With this system, students got course information about activities and events, and could also communicate with classmates and teachers on the same electronic platform they used for their social relationships. It should be mentioned here that when sharing our experiences and evaluation of the project 4 students considered that, although positive, activities related to MSN were difficult for them either because they did not use this channel for socializing or because due to age and personal circumstances they were unfamiliar with computers. Students openly admitted that they only participated in this practice because of the novelty factor.

In the post-semester voluntary seminar, students positively valued the use of this technology, as survey results show, yet it was made clear that they were not using this social network as often as others. Moreover, students added that they preferred to have a web-site or electronic domain which guided them along the syllabus. According to students' observations, they found the content developed in *MSN* addressed personal doubts and, thus, it failed to follow any chronological or pedagogical order. If students were not connected to *MSN,* they did not know doubts were being solved or explained in depth. Thus, participation should have been encouraged in class. These limitations led me to design an education blog. By using the blog as a 'shop window' I was able to share every single solution, conversation, recommendation, curiosity and class content with all the students at the same time in orderly fashion as Wise (2005) illustrates in her approach to blogs in medical education.

Education blog

The study of blogs and how communication has evolved, or even emerged in these new channels of information exchange have led to many insightful studies in applied linguistics and teaching (c.f. Myers, 2010; Luzón, 2011, 2015; among others). Here, the purpose of designing an education blog was to trigger the learning process by organizing the delivery of the subject content in an attractive way. It consisted of displaying content material in such a way that it brought students into contact with real medical discourse environments and thereby acquire skills in medical language.

The use of education blogs helps students to scaffold learning since many of the activities and suggestions proposed in the blogs enable them to refresh, review and reinforce related knowledge and language contents. This practice provokes self-reflection processes thanks to the interplay of their own ideas and thoughts, which to a certain extent, implies an invitation to *intra* and *inter-subject* conversations (Chomsky, 1979) through the variety of features offered by the education blog.

This education blog offered a virtual setting where students could not only reflect on their own learning process but also where they could cooperate and collaborate on collective tasks by adding comments on posts. One of the activities carried out using the blog was summarizing 55 research articles written in English. Fifty-five articles were chosen because that was the overall number of students that participated in the practice, so every student had his or her own article to work on. These texts were posted on our blog and commented on by the rest of the class. Above all, this teaching practice was designed to encourage follow-up, especially for students who for the above-mentioned reasons could not attend class.

In class, I announced every day that follow-up activities and further content were to be posted on the blog, as illustrated in Appendix 4. Therefore, I actively encouraged my students to visit it. In addition, I also summarized and explained in depth what had been done in class to aid students unable to attend.

In *medicalenglishinuse.blogspot.com* students were able to check information on the evaluation process, guidelines to complete tasks, individual tasks, sources of relevant information, recommendations, and our class bibliography, among other things. In the main body of the education blog, I posted weekly practical and theoretical explanations of what had been done in class. There was for instance another section, on one side, which displayed *further information/implication* tips. In addition, students also shared related content, which could be interesting to the group, as exemplified in Appendix 5 (articles, links and events.):

According to the answers given in the questionnaires (n=55), 45% of students indicated that using an education blog for keeping up to date was "very appropriate" while 55% said it was "appropriate". None of the students considered it to be "inappropriate". As Figure 2 shows, 81.66% of students believed that the tool helped them in the acquisition of skills in medical discourse and in their follow-up in the subject as opposed to 18.33%, who considered the tool unhelpful.

Figure 2. Percentage of students who evaluated the usefulness of this education blog regarding language acquisition and the subject follow-up.
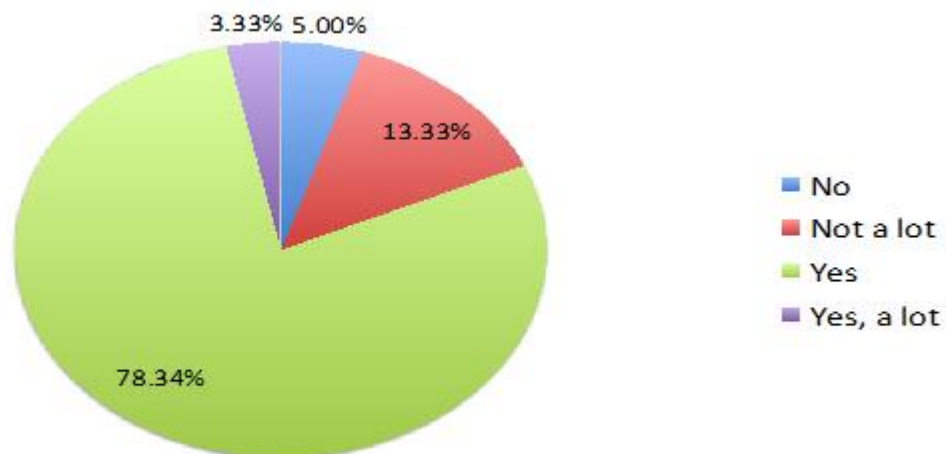
Students were also asked whether they would change the content displayed in the course education blog. Although no written suggestion was given, 88% of students (48) said that content was adequate while 12% (7) suggested change.

The fourth question on the questionnaire invited students to rate blog implementation from 1 to 10. 86.66% of students gave the project a grade over 8.

The final question was a section open to suggestions. Although positive, here students wrote suggestions regarding 'being required' to check the education blog almost twice a week and they did like doing it. Their reaction prompted me to take a different course of action, namely the study of an instant and automatic more personal social tool, *Facebook* (c.f. Bosch, 2009).

Students' perceptions, together with the teacher's observations gathered in class and in the post-semester seminar, strongly suggest that this type of project is sustainable and applicable to ESP learning. Clearly, the use of these tools can be extended to any discipline, subject or teaching-learning scenario provided Internet and technical devices are available. This teaching resource seems to be efficient and valid yet it may demand some effort if teachers are not used to creating blogs. Nonetheless, most of the students who attended the voluntary seminar to share experiences at the end of the course were not entirely at ease with the requirement of visiting the blog weekly and they did indeed show a certain amount of reluctance. Based on my experience on MSN, I required students to visit the blog so they could keep up to date with class activities and they did not like that. They seemed to regard visiting the course education blog on a weekly basis unfair given that they saw the teacher three days a week, thus enabling information to be shared in class. Both teacher and students reached the conclusion that students failing to attend class are the ones who should be required to pay a weekly visit to the

education blog. Students suggested that they would prefer to use technology integrated in their ordinary routine that both kept them up to date while provided them with some food for thought. Since some of my students told me they were regularly using Facebook, I thought that service would perfectly combine all my teaching objectives.

Facebook

The aim of this practice was to prompt interaction among students and teacher whilst reinforcing language acquisition trying not to make students invest extra time (Yazid & Wang, 2009) as students suggested in the previous cases. Doubts proposed in class were clarified, further developed and distributed by the course's *Facebook* account to all the students who agreed to participate in the practice. Thus, language reinforcement was instantly provided to everybody who had joined me on *Facebook*. Therefore, all the participants, including students who could not regularly attend class, were constantly informed of all events and issues related to the course since all the participants previously used *Facebook* and checked it regularly (several times a day). This resource enabled dynamic teaching and learning exchange by supporting electronic debates in real time. Thanks to the use of mobile phones students assiduously check their *Facebook* wall, 'liking' and 'following' their friends' lives or posting their own updates. This enabled them to see the activity, on their *Facebook* walls, of www.facebook.com/cienciassaludingles, provided that it was installed on their smart phones. Every week all the content-related information was published on the *Facebook wall* with the option *post a status update*. Further comments related to the most difficult issues and the most frequent questions were also posted and, thus, equally distributed to everybody instantaneously. Appendix 6 provides an overview of how suggestions or further comments on communicative competence acquisition were posted (conferences, web pages, publications, teaching materials, etc.).

These posts or publications aroused both positive comments–which reinforced some aspects of the subject–and students' suggestions about the information distributed. All these comments were public yet respectful to all the students and the teacher.

This tool also enables individual communication among teacher and students thanks to the *chat* and *private messages* options. These options also allow the teacher to clarify doubts related to theoretical or practical aspects which may be unclear to individual students. Thus, individual follow-up or mentorship was also assured thanks to this practice.

Regarding students' data, 86.6% of the students (n=15 students) registered in this subject voluntarily participated in this practice (N=17). The remaining 14.4% did not contact the course teacher before the final exam. The rate of academic success coincided with the rate of participation in this teaching practice. In other words, students who kept up to date with the course content and were able to reinforce their language acquisition through the use of this tool succeeded in passing the subject.

Regarding students' satisfaction with this practice 13 students (83.3%) of the students stated that they totally agreed with the initiative and 2 students (16.7%) agreed with the adequacy of the project. Not one single student disagreed partially or totally with the project.

All the students who participated in the project stated having accessed the course *Facebook* profile to be up to date with the subject content and language learning development. Only one student stated he/she had not used this tool to directly contact the teacher. Finally, 100% of

students agreed on the potential of the use of *Facebook* to reinforce their teaching and learning process in the pre-Bologna academic context. The overall mark that students gave to this project was 8.33 out of 10. All the students rated this initiative with a minimum of 7 out of 10. This highly positive feedback, obtained from students' opinions and perceptions, highlights the benefits of using new technologies and ICT as beneficial instruments in language learning at any educational level.

To conclude, it should be pointed out that I felt rewarded when evaluating this instructional evolution with students whilst sharing and exchanging our experiences on the use of the course *Facebook* profile in such an outdated academic setting. Students enjoyed sharing both feedback on the course's contents and curious facts they came up with regarding medical English. They admitted being alert and receptive enough to English medical facts to share them on our course *Facebook* and even felt a competitive edge in keeping the profile content dynamic and interesting. Nonetheless, the use of this technology addressing to solve the stress cased on students by the European educational change, which provoke lack of communication and motivation among students and teachers, may also have drawbacks as it will later be pointed out. In the voluntary seminar students also stated that there was certainly an additional investment of time with this technology. Although the value of Facebook was that most of the students were already users and, thus, they were not having to visit a different system to participate, students were forced somehow to invest their personal time to participate in this activity.

All in all, these findings lead me to point out that these ICT activities can be recognised as examples of best practices since they are advantageous complements to teaching not only applicable in the European educational change this articles refers to but also in any teaching contexts. At the time this study was conducted I was concerned, with Prensky (2001), with the existing gap between our students and us as digital natives and digital immigrants yet, I felt I had to attempt a first incursion in technology learning by doing. Now, a few years after this study was conducted, I am comfortable with technology and I even created a *Facebook* profile mainly for professional purposes since as Hyland (2017) states, our visibility in the academia has an impact in our academic careers. I would add here that our visibility and social interaction as academics, teachers and global citizens can be created not only by getting your work published but also making the most of these multipurpose social tools.

Conclusions

These practices were undertaken to assist students in their language learning whilst encouraging student-teacher interaction via new technologies amid the most sweeping changes Spain's higher education institutions have ever witnessed. Hence, this research evaluates how students value these virtual social tools in such a conservative academic setting. For Bosch (2009), the advantages could include demystifying the divide between teacher and student. 'By incorporating the online habits of Net Generation students within the framework of clearly defined pedagogical goals, educators can tap into the distinctive proficiencies of their students while ensuring focused learning and positive outcomes' (Barnes 2007, p. 5). It should then be claimed that the use of Web tools, social networks, ICT or other technologies could help teachers introduce course materials in a significant, dynamic, instant and appealing way. The overview of the results of these good practices–based mainly on new channels of communication embedded in their ordinary social life–produces a positive response to medical English courses among ESP students in real-life communicative settings. Whilst checking their

profiles or reading the course tasks or updates, students can surf the net attracted by what their classmates have uploaded. This motivates students to read more, search more, and, thus, have greater contact with English-content related scenarios. Hence provided our students have access to Internet technology, they are brought into contact with real and significant learning outside the classroom regardless of their actual location. As students stated, they are constantly developing reading and writing skills in realistic communicative situations close to the ones they may have in their future professional careers.

In sum, I conclude that the evolution of this instructional design has fulfilled the objective of this action research since students were motivated to learn and showed a positive attitude towards these practices. The fact that students valued these more personal technologies when used in an academic context in Spain is salient.

Nonetheless, whilst it has been argued that using these social tools is more of a benefit to teaching than a threat (Hourigan, Murray & Riordan, 2011), it is also true that these practices have limitations and expenses. One may argue that there is expense, but maybe not additional expense outside their existing hardware and services. Older students felt that being forced to use these tools and not possessing a smart phone was problematic. In addition, students had to invest extra time mainly with *Messenger* and the blog since their implementation was designed as an additional resource, and that could also be regarded as financial outlay. As for my experience, I felt uneasy at times, like an intruder who witnesses his/her students' personal lives on *Facebook* and their loss of privacy. In addition, I realised students are also paying a price for using this service since their *likes* and activities are being tracked back and studied by this service which bombards users with specific advertising related to their interactions using *Facebook*.

One of the possible limitations of this research is related to the survey-based approach. The size of the sample could be considered small and not representative. This might be due to the fact that not many students were registered in these subjects. However, most of these students participated in these action research initiatives and they positively conceptualized these practices as shown in the study findings. It should be said that the research participants were my students and this fact could have influenced them to actively show a positive attitude to the activities and the technologies used just being concerned about their grades. However, as mentioned in the Methods section, no extra grade was given to those students who participated in the teaching project and the final grade was obtained from a final objective exam. In addition, although the objectives of this action research were met, these results can also be differently interpreted. This study may also suggest that despite this author's intention to implement her teaching practices with technology, Spanish system might have initially failed to align with the process of change affecting universities. In other words, whereas EHEA invited universities to encourage undergraduates' digital competence acquisition, some of the lecturers unintentionally misled the notion of technology applied to language learning with social media and personal technologies.

In conclusion, these practices enhance learning consolidation in an efficient way whilst promoting the acquisition of students' communicative competence since the three experiences described here are based on participation, collaboration, reflection, synthesis and knowledge elaboration carried out by the intra and inter subject dialogue posed by students in these virtual spaces. ICT tools are advantageous in that they enhance language acquisition and offer teachers a seemingly endless range of options regardless of the educational level or students' location. Hence, this study proposes that these teaching practices can be considered best practices since

they are not so time-consuming for teachers and have been proved to be resourceful for this learning environment. This paper suggests that the use of social tools in ESP lectures in Spain are valid useful resources to engage with students' attention and to raise their awareness of the multiple learning opportunities students are exposed to in their ordinary lives and with the varied range of stimuli they handle. For that purpose, *Facebook* seems to be the best option to pursue these goals. Future research on the potential contribution of these (and more) tools to students' autonomous and collaborative learning from a constructivist perspective is being conducted since students are exposed to different linguistic and content-related inputs, suggested by teachers and students. This may awake further interest.

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Appendix 1

Academic year 2009-2010   (PESUZ 09-5-006)

CienciasSaludIngles@hotmail.com
MSN Messenger

Please help us to evaluate this innovation and good practice Project fulfilling this questionnaire:

Degree:___
Age:_____
Gender:___

1. In your opinion, does this project need technical expertise?
    1. Yes
     2. No
2. Do you consider this project useful to enhance the course follow-up?
     1. Yes
     2. No
3. How do you consider the course *Messenger* to encourage communication and content follow-up?
    1. Very appropriate
    2. Appropriate
    3. Not very appropriate
    4. Inappropriate
4. Has this system of *tele-tutorials* been detrimental from personal contact with your teacher?
    1. Yes
     2. No
5. Do you consider this ICT tool positive to enhance your linguistic competence?
    1. Yes
    2. No
6. Please rate this initiative being 1 the lowest value and 10 the highest: _____

Appendix 2

Academic year 2010-2011   (PESUZ 10-5-028)

http://medicalenglishinuse.blogspot.com

Please help us to evaluate this innovation and good practice Project fulfilling this questionnaire:

1. How do you consider the course education blog to guide and encourage your medical discourse learning?
    1. Very appropriate
    2. Appropriate
    3. Not very appropriate
    4. Inappropriate
2. Has this tool helped you to reinforce your medical discourse and to follow up the course?
    1. Yes, a lot
    2. Yes
    3. Not a lot
    4. No
3. Would you change the education blog's contents?
    1. Yes
    2. No
4. Please rate this initiative being 1 the lowest value and 10 the highest: _____
5. Do you have any suggestions regarding the use of http://medicalenglishinuse.blogspot.com as a course resource?

Appendix 3

Inglés Médico   **Academic year 2011-2012   (PESUZ 11-5-101)**

Please help us to evaluate this innovation and good practice Project fulfilling this questionnaire:

1. Gender:
    5. Male
    6. Female
2. Age _____   years.
3. Course: _____
4. Did you have a Facebook account before joining this English course?
    1. Yes
    2. No
5. If not, have you created an account to participate?
    1. Yes
    2. No
6. Facebook has turned to be a useful tool to communicate important aspects of this subject:
    1. I totally agree
    2. I agree
    3. I disagree
    4. I totally disagree
7. Have you used this resource to communicate with your teacher or/and classmates?
    1. Yes
    2. No
8. Have comments and pieces of information posted in *Facebook* favoured your medical discourse acquisition?
    1. Yes, a lot
    2. Yes, a little bit
    3. Yes, to some extent
    4. No, not at all
9. Do you consider appropriate to use Facebook in other subjects for the same objectives?
    1. Yes
    2. No
10. Please rate this initiative being 1 the lowest value and 10 the highest: _____

Appendix 4

Figure I. An example of the course's education blog posts.

Appendix 5

Figure II. An example of how students also shared and commented on course related information.
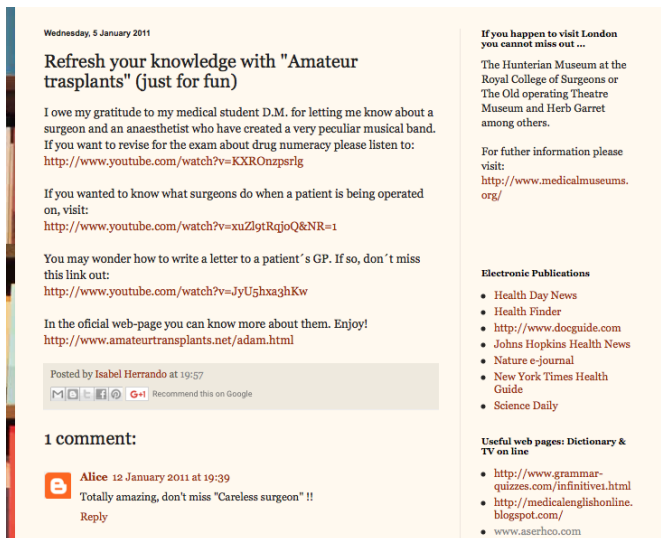
Appendix 6

Figure III. An example of how different chunks of information were delivered on the course *Facebook*.