Rosa Muñoz-Luna
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Integrating Information and Communication Technologies in English for Specific Purposes

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Foreword

It would not be an exaggeration to say that teaching and learning foreign languages, especially at the university level and for special purposes, without the use of the so-called new media and modern technologies (most of which, in fact, are no longer so new) can hardly be imagined in the twenty-first century. Educators have always been seeking alternative, unconventional, innovative and, at the same time, efficient methods and techniques for teaching. They have also been applying all possible technological innovations in the didactic process to make it more attractive and interesting in order to increase students' motivation and to improve and accelerate learning.

Glottodidactics (language pedagogy) has moved a long way from the educational applications of inventions such as radio, television, tape recorders and video and overhead projectors (each of them being a real breakthrough when they appeared) through language laboratories to CD players, computers and other electronic/digital devices connected to the Internet with all its capabilities; these are all currently known collectively as information and communication technologies (ICTs). Moreover, in the last decade, the Internet has been transformed from a purely informative resource (enabling the use of online dictionaries and the gathering of encyclopaedic information and news, etc.) to something that also offers numerous communicative functions (e.g. electronic mail, chat rooms, forums, discussion groups, video conferences and e-learning platforms). It is now an interactive tool for teaching and learning and an environment in which education may take place either exclusively, in the form of e-learning, or partly collaboratively, as in blended learning, assisting and completing face-to-face contact; this concept is referred to as Web 2.0. It has changed the paradigm of communication among the users of the Internet, increasing their autonomy and possibilities of integration and interaction and also enabling their cocreation of the Internet.

Another issue in foreign language education, besides ICTs, but quite frequently closely related to them and regaining popularity, is the use of ludic techniques,[1]

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[1] The terms 'ludic strategy' (*strategia ludyczna* in Polish)—understood as the use of techniques referring to the ludic sphere of human activity for teaching purposes—and 'ludic techniques'

which comprise games, play (including music and the use of songs), simulation (and other varieties of role-playing) and intermediate forms. Actually, these techniques have been used in education since ancient times. However, in the last decade, they have become the scope of the research for the young and still forming and developing academic discipline of ludology, also known as game studies or games research. Ludologists—games researchers—more and more often gather in ludological associations, of which at least two are worth mentioning here: the Digital Games Research Association (DiGRA) from Finland and the Games Research Association of Poland (GRAP; in Polish, Polskie Towarzystwo Badania Gier [PTBG]). Both organise regular international conferences and publish academic journals.[2]

The term *ludology* is a neologism[3] resulting from the combination of two words: one derived from the Latin word *ludus,* meaning 'play' or 'game' (but also 'the place of exercises' and 'school'), and a derivative of the verb *ludere,* 'to play something' or 'to have fun', which had a broad usage in ancient Rome for games and playing, and the Greek word *logos*, referring to reason and science and currently used in the form of the suffix *-logy* to create names of academic disciplines. At the same time, another term existed in Latin—*iocus* (*iocari*)—that referred to a much narrower sphere of jokes and mischief. Yet, surprisingly, it is the latter that with time expanded its meaning to signify 'play' and 'to play' and was transferred to Romance languages, transforming into the contemporary *jeu* (*jouer*) in French, *giuoco* (*giocare*) in Italian, *juego* (*jugar*) in Spanish, *jogo* (*jogar*) in Portuguese and *joc* (*juca*) in Romanian. Incidentally, many European languages do not distinguish between 'play' and 'game'; thus, there is one word for both in German (*Spiel*), Dutch (*spel*), Russian (*igra*) and—as mentioned above—French (*jeu*). Moreover, even if there are two separate words, as in English and Polish (*zabawa* [play] and *gra* [game]), their semantic fields are not always identical (crosslinguistically). Moreover, the meanings of both terms often overlap, even within the same language, causing misunderstandings among researchers even within a single language, let alone across languages. Therefore, in the literature of cultural studies, psychology, sociology and pedagogy, both terms coexist and very often are used interchangeably without

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(*techniki ludyczne*) were introduced and analysed for the first time in Poland by Siek-Piskozub (1995, reedited and completed 2001). The printing of a postdoctoral publication in 1995 was preceded by a paper read at the 26th Linguistische Kolloquium in 1991 (Siek-Piskozub 1993) and a book for teachers: Siek-Piskozub (1994, 2nd ed. 1997), which has since also been translated into Romanian.

[2] More information can be found on their official websites: http://www.digra.org/, http://todigra.org/index.php/todigra, http://ptbg.org.pl/, http://gry.konferencja.org/, http://ptbg.org.pl/HomoLudens/,http://ptbg.org.pl/strona.php?id=9

[3] None of the known ludologists to whom the authorship of the term has been ascribed (Gonzalo Frasca, Espen Aarseth, Markku Eskelinen and Jesper Juul) has confirmed having coined it. According to Juul, it was a Hungarian psychologist, Mihaly Csikszentmihalyi, who first used the term in 1982 in his article 'Does being human matter? On some interpretative problems with comparative ludology'. Source: http://www.jesperjuul.net/ludologist/2004/02

defining either of them, in spite of numerous attempts from the perspectives of multiple disciplines.

The famous Dutch historian and culturalresearcher, Johan Huizinga, in his classic work *Homo Ludens: A Study of the Play-Element in Culture* (1938), coined the term in the title (playing person/person at play) as complementary to *Homo faber* (creative person) after the original *Homo sapiens* (thinking person) had turned out to be not suitable enough for humanity. Huizinga argued that *Homo faber* was even less accurate than *Homo sapiens*, as many animals are also creative, and what refers to creativity refers also to play. He claimed that human culture is created and develops in play and as play.

Both issues—ludic strategy and ICTs (often carrying numerous ludic features)—turn out to be perfectly combined in the concept of gamification of higher education and applied in the teaching of various subjects at the academic level (including foreign languages). However, gamification should not be confused with simple applications of ludic techniques in the didactic process, which would be nothing new in education. It goes one step further and gamifies the whole process:

> To cut a long story short, gamification is a structured design of non-game environments, deliberately making them game-like in order to increase engagement, efficiency and positive attitudes. We take systems of goal structures, rule-based choices, outcome measurement and feedback from games and implement them in a non-game setting. Or, to be more specific, we do not take anything from games directly—we use game mechanics as models for the restructuring of existing procedures of management, communication and assessment.[4] (Mochocki 2010, https://sites.google.com/site/michalmochocki/highered-gamification)

Unfortunately, however, not all teachers care about mastering their technical skills in order to keep pace with the rapid development of modern media and electronic devices. For various reasons, they do not improve their competences, which makes them digitally handicapped if not almost completely 'digitally excluded'. By the same token, they risk losing trust, respect and authority in the eyes of their students. Publications such as this one can get them more interested in this subject and at least motivate them to try to develop themselves. Moreover, such publications can make teachers realise that ICTs are very often within easy reach (and free, e.g. the large amount of educational 'freeware' available on the Internet, including many e-learning platforms) and do not require any specialist knowledge for use in their everyday practice—only a little goodwill.

This book is dedicated especially to readers who eagerly seek pedagogical applications of ICT in the practice of teaching English for specific purposes (ESP),

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[4] Source: <https://sites.google.com/site/michalmochocki/highered-gamification> (Michał Mochocki PhD, Kazimierz Wielki University in Bydgoszcz, Poland). Dr Mochocki is the initiator and main author of the first gamified programme of studies in Poland: 'GAMEDEC: Game Studies and Design' specialisation of the 2nd Gen Humanities BA programme at KWU in Bydgoszcz (Poland).

More elaborate introductions to gamification can be found in dozens of places online. You can try these: <http://gamification.org/wiki/Gamification>, <http://www.idea.org/blog/2011/10/20/what-is-gamification/>, http://lithosphere.lithium.com/t5/Science-of-Social-blog/What-is-Gamification-Really/ba-p/30447

including English for academic purposes (EAP) as well as English for occupational purposes (EOP). Its clear division into three parts, referring to these purposes, enables readers to easily find chapters concerning the subject of their interest. It is a precious source of multiple suggestions and guidelines supported by unique case studies for practitioners to understand the pedagogical principles proposed by scholars and educators. It can easily constitute a good foundation for readers who want to begin their 'adventure' with the use of ICT in their practice and to understand better the interrelationships between the benefits of ICT, the most popular uses of technological tools in authentic instruction, the pedagogical principles behind the integration of ICT into ESP and the relations between learners and teachers as instructors or facilitators.

The book contributes significantly to the field of practice of teaching ESP and helps to cultivate the idea of the autonomous foreign language learner.

Augustyn Surdyk

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Introduction

Rosa Muñoz-Luna and Lidia Taillefer

Abstract The present volume aims to demonstrate how technology has had an impact in the world of English for Specific Purposes. By providing a thorough overview of several technological resources, the authors invite teachers, researchers and language professionals to make the most of online and technological activities. The book explores academic and occupational settings where the focus is on English as a second language, always considering technology as the basis for innovation and improvement.

The English for specific purposes (ESP) movement has played an important role besides the teaching of general English since the 1960s. Current research developments have shown that specialised fields, professional jargon and academic lexicon have established themselves as a linguistic and pedagogical framework for English language-teaching scenarios. Specific language purposes drive the teaching and the learning of a foreign language when this is going to be used in a particular environment. Since there is need for language for specific purposes courses, ESP seems to function well as an umbrella term for a wide range of English language teaching syllabi. ESP courses reflect different contextual needs addressing various audiences, but these language courses share a vibrant teaching scene with a common point of reference: innovation.

Innovation in the humanities brings inevitable competitive pressure to meet new upcoming challenges that require proficient use of technology. Nevertheless, beyond the role of technology uses, language teachers and researchers must now explore the field of digital activities and resources. These are more attuned to the competences of current learning environments. ESP and technology seem to fit together perfectly: ESP courses follow a needs analysis that covers the needs of all educative agents involved (e.g., teachers, students and materials). In this regard, technology answers the digital needs of the aforementioned agents, bringing into ESP courses the neces-

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sary instruments for the achievement of digital competence. In fact, technology needs or new specialised digital literacies can be incorporated into the goals of particular ESP courses.

In this arena, the creation and use of digital applications in the teaching of specific languages deserves special attention. Indeed, there is growing academic and occupational interest in the topic, as it has been the focus of discussion in recent years. Thus, we conclude that technology implementation in language for specific purposes classrooms and professions can be viewed from two different but complementary perspectives:

- Teachers and other language professionals as digital users of online activities and technological applications.
- Teachers and professionals as innovative creators of those applications, contributing from their practical experience.

Such a double conception of technology implementation and practice, in both academic and occupational spheres, demonstrates the need for a double approach to the matter. Language teachers and professionals are leaders in the use of information and communication technologies (ICTs) and at the same time demand practical hands-on training on a continual basis. Even if those two perspectives might seem controversial, teachers, researchers, translators and other language professionals should try to build bridges between both of them. Digital training and digital creation are two sides of the same language-teaching coin, thus leading to an inevitable interdisciplinary context. This complex reality can unite teachers' and professionals' efforts, with the aim of accomplishing a range of goals that are beyond the scope of a single discipline.

Consequently, the objective of this volume is to highlight the interdisciplinary nature of ESP courses and to build bridges among them by means of classroom technology innovations. Being cognisant of the varied contexts, levels and needs that each student group requires, we want to provide technological solutions and innovating methods for ESP courses in the fields of academic, medical and business English. Furthermore, we offer ESP practitioners different ideas for online teaching tools such as telematics dictionaries, virtual environments for translators, corpora, video clips, wikis and learning management systems.

Following the ESP classification by Dudley-Evans and St. John, the book is divided into English for academic contexts and English for occupational fields, with an introductory section on principles and limitations of technology implementation in ESP settings. In the first part of the volume, Li Li (University of Exeter), in chapter "Integrating Technology in ESP: Pedagogical Principles and Practice", explores the benefits of technology in ESP teaching and the the reasons behind the slow adoption of technological methods by teachers. She establishes some principles for integrating technology in the classroom that solve deficient computer literacy and lack of ICT awareness. In chapter "Using Technology in the Teaching of ESP: Some Reflections Based on Practice", leaving the theoretical perspective, Sandra Stroo (University of North Texas-Hockaday School), Rosa Muñoz-Luna (Universidad de Málaga) and Antonio Jurado-Navas (Denmark Polytechnic University) present a series of electronic applications, computer programmes and classroom ideas to

combine technology and the teaching of ESP. The boundaries of technology applicability in the class are also enlarged by Renia López-Ozieblo (Hong Kong Polytechnic University) in chapter "Independent ESP Learners: The Case for Blended Learning". She explores the new dimensions and uses of blended learning modes in a society that is constantly looking for educational solutions. As part of the teacher's formation, digital consciousness and integrative practice are crucial in order to effectively utilise computers and technological devices with the students; therefore, López-Ozieblo's chapter includes a series of pedagogical suggestions for blended learning implementation in second language classrooms.

Within the English for academic purposes (EAP) strand, in chapter "The Internet as a Pedagogical Tool in the Writing Process: A Research-Based Approach", Mercedes Díez-Prados (University of Alcalá) and Ana Belén Cabrejas-Peñuelas (University of Valencia) have proposed the Internet as a facilitator resource for the planning, writing and revising stages in the composition of a text in English as a second language. These authors describe a pedagogical proposal in which Web 2.0 applications are employed to write essays in academic contexts. In this case, the Blackboard platform can be of help to students and teachers alike, as it provides both groups with information about writing tasks. In a similar vein, in chapter "Learning Management Systems for Teaching at the University Level: Students' Attitudes and Real Usage in the Classroom", Antonio Jurado-Navas (Denmark Polytechnic University) has examined students' attitudes towards the use of virtual environments where they are encouraged to learn. In this chapter, he aims to shed some light upon so-called learning management systems and, more specifically, upon the students' real perceptions of them; according to the research subjects, the teacher implication and actual management of the virtual platform are what motivate them to learn without anxiety, regardless of technology level. A foreign language skill that usually provokes anxiety in students is listening. With the goal of improving the listening abilities of university students, Ana María Ramos-García (University of Granada), in chapter "English for Academic Purposes: A Proposal to Improve Listening Skills of Education Students", designs a series of activities and a teaching plan to facilitate and improve the listening practice in the classroom.

In another effort to create anxiety-free spaces, Lan Li (Hong Kong Polytechnic University), in chapter "Multimedia EAP Learning in Virtual Reality: Second Life in an English Department", explores the online possibilities of virtual. Li describes her teaching experiences in the English classroom using Second Life, a 3D simulator which creates a parallel virtual universe where students and teacher can interact in English as if they were part of videogame life. Thanks to Second Life, learners are virtually immersed in a set of circumstances in which they are protagonists interacting in English. Motivation is guaranteed for students who are digital natives and who overcome interaction barriers online.

As far as English for occupational purposes is concerned, Pedro A. Fuertes-Olivera (University of Valladolid) introduces in chapter "ESP and Free Online Dictionaries" a possible way of smoothly adapting to the virtual environment: the use of free online dictionaries. These virtual tools are particularly useful when gaining conceptual knowledge and insights into the theoretical framework in a certain discipline or domain. In addition, he considers certain characteristics for deciding

on the adequacy of the dictionary to be employed, in this case, in the field of business and economics. In chapter "Translation, Virtual Environments and ICT Tools for Achieving Competence in Language for Specific Purposes", Encarnación Postigo-Pinazo and Concepción Mira-Rueda (University of Málaga) provide a response for the recent increasing demand for medical tourism in Costa del Sol (Spain). Medical translators are in need of a dynamic virtual tool which gathers practical advice and pedagogical suggestions in order to become competent scientific writers, translators and interpreters.

Within the same field of English for occupational purposes, the issue of ESP course design is a topic of interest for native and foreign speakers, teachers and students. In chapter "A Business English Course in the Digital Era: Design and Analysis", Lidia Taillefer (University of Málaga) analyses a complete course in business English which blends online learning with face-to-face interactions: the ideal combination for language progress. Her suggested activities have been designed and developed within a plan for technology implementation in language teaching, and these take into consideration students' needs and teacher preferences alike. In the last chapter of our volume, Leah Leone (University of Wisconsin-Milwaukee) compiles theoretical and practical approaches to designing training courses for translators. She describes the benefits of online environments for translators' training, practice and professional development since almost all their learning and work will occur on the web. The continuous emergence of online courses at graduate or postgraduate levels propitiates contextualised training for translators, who will start and grow professionally online. Leone proposes the use of backward course design, so her chapter is also designed that way: From needs analysis, course designers move to objectives and then align those with assessment and evaluation of students. In this case, the author explains and elucidates Bloom's revised taxonomy.

Technical solutions for pedagogical problems seem to be the perfect tools to create a sense of shared innovation and progress. In addition, those technical improvements are no longer perceived as highly-specialised notions, traditionally far from user-level understanding. Nowadays, technology embeds affective issues in the classroom as it considers the professional motivations, concerns and commitment of the students. In fact, the type of training technological software offers is now entirely integrative, combining cognitive procedures, factual knowledge and procedures. Technology is currently accessible to everybody, and so is knowledge. Open source programmes facilitate massive access to culture and information by average computer users, something that has also changed the nature of learning forever. Teachers and instructors are no longer in possession of truth and resources, but resources are open and available to everybody, and knowledge is always relative as it is socially constructed.

In conclusion, the different contributions presented in this volume aim to provide holistic and cross-disciplinary solutions to upcoming challenges and technological barriers recently arisen in the language teaching field in general and the ESP domain in particular. Social sciences, computer sciences and daily technological devices unite to create a more interactive learning background where new frameworks that contribute to the integral development of the student, both academically and personally, can be practised and constructed.

Part I
Pedagogical Principles in English for Specific Purposes

The first part of this volume, consisting of three chapters, shows how the integration of technology into education has been an important agenda for educational reform all over the world and how English language teaching has been heavily influenced by this move (Avalos 2011, pp. 10–20). Despite the benefits of technology in language learning and teachers' positive attitudes towards it, ESP teachers demonstrate slow adoption in using new technologies for various reasons, despite the benefits it can offer (Kumar and Rani 2016, pp. 26–34). The chapter by Li Li reviews the literature in both computer-assisted language learning and ESP in order to set out principles for integrating technology and to offer some exemplary practice, covering various types of technological tools in both EAP and EPP contexts. These pedagogical principles could be used as guidelines to assist teachers to integrate technology and as directions for teacher education in integrating technology.

Similarly, the chapter by Sandra Stroo, Rosa Muñoz-Luna and Antonio Jurado-Navas aims to provide an overview of the most commonly used and basic technologies in ESP. Since the authors' cultural backgrounds are different, they have focused on those that are common in their three educational university settings: the United States, Spain and Denmark. Starting with academic management systems such as Blackboard, they mention advantages and challenges of these and other software resources that can be found within those management settings. Another key aspect of new learning environments is student interaction and participation, which is the main purpose of the application Educlick. Finally, mobile uses in the classroom and audiovisual materials are broadly revisited. Undoubtedly, these technical and technological devices will also help to cover ESP needs.

In the same vein, Renia López-Ozieblo, after describing the different instructional options available online, argues that massive open online courses (MOOCs) are not the optimum solution for ESP educators, whose role is to help learners communicate in the second language independently and develop their critical and creative thinking. Instead, she advocates a methodology that combines a face-to-face

approach with the use of ICTs, blended teaching and, in particular, a flipped classroom strategy. This has the benefit of maintaining social interaction, key to the learning process, in the classroom while also developing it online.

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Integrating Technology in ESP: Pedagogical Principles and Practice

Li Li

Abstract Integrating technology into education has been an important agenda for educational reform all over the world, and English language teaching has been heavily influenced by this move. Despite the benefits of technology in language learning and teachers' positive attitudes towards technology, ESP teachers have demonstrated slow adoption in using new technologies for various reasons, including lack of awareness and deficient computer literacy and ICT pedagogy, despite the benefits technology can offer to languages for specific purposes (LSP). In this chapter, I review the literature in both computer-assisted language learning and ESP to draw principles for integrating technology and to offer some exemplary practice in both English for academic purposes (EAP) and English for occupational purposes (EOP) contexts, covering four types of technological tools: corpora, web-based materials, computer-mediated communication (CMC) and wikis. These principles can be used as guidelines to assist teachers to integrate technology into teaching and as directions for teacher education in integrating technology.

Keywords English for Specific Purposes (ESP) • Information and Communication Technologies (ICT) • Computer literacy • Computer-assisted language learning • Integrating technology • Technological tools • Corpus • Web-based materials • Computer-Mediated Communication (CMC) • Wikis

1 Introduction

Research in technology use in second- and foreign-language classrooms has flourished since 2000 (e.g., Chapelle 2003). Despite the positive attitudes towards using technologies in teaching among language teachers globally (e.g., Baek et al. 2008; Li and Walsh 2011), teachers still demonstrate difficulties and concerns in integrating technology. This is especially true with English for specific purposes (ESP) teachers due to lack of awareness, more comfort with text environments, deficient

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computer literacy and contentedness that technology does not deliver educational success (Virkus 2008). The general observation is that apart from realizing the benefits of technologies and getting tips on how to integrate technology in teaching, teachers need to be aware of the principles of using technology in teaching. This chapter aims to outline the principles and practice of technology use in ESP contexts. It is worth noting that although these principles are used in ESP contexts, they are also applicable for the contexts of learning English for general purposes.

The goal of this chapter is to introduce principles of technology integration in ESP instruction and to provide guidance for making it more practical in language classrooms than it has previously been. First, I will discuss the characteristics of ESP and the benefits of technology in language learning. Then I will outline five general principles for integrating technology in teaching ESP, with some examples in English for academic purposes (EAP) contexts and English for occupational purposes (EOP) contexts, such as English for business purposes. Finally, I will provide a brief discussion of the principles and practice and the role of teacher training in cultivating the area further.

2 ESP and Its Characteristics

English for specific purposes has a long history and is becoming increasingly popular as globalization necessitates communication within and across their disciplines internationally. The popularity of ESP has also resulted in the evolution of the definition and an increasing number of different definitions. Again, this is partially due to differences between disciplines and the variety of situations where English is used. The evolution of the definition has also seen shifts in ESP pedagogy from specialised vocabulary acquisition to language use in context. Currently, ESP has developed towards a learner-centred pedagogy that emphases the importance of needs analysis. ESP learners need to understand authentic texts and how to communicate effectively in the situations they encounter in their discipline rather than master field-specific terminology (Smoak 2003). However, vocabulary is still an important learning element for ESP for at least two reasons: First, there is a widely shared belief that students would be able to understand concepts and phenomena in their disciplines better if they incorporated specialist language and terminology in their academic work (Woodward-Kron 2008), and, second, students need to have specialized discourse competence to succeed in their studies and engage in group activities (Hyland and Tse 2007).

As discussed above, defining ESP is not an easy task, since the requirements for English are different for different disciplines. For example, the kinds of communication skills and language genres in the contexts of business and medicine are completely different, since the purpose of communication is different. In a business setting, people use language to market their products or negotiate deals, which require establishing shared understanding and giving information and skills of negotiation and discussion, whereas in a medical setting, understanding, listening

with empathy and giving instructions are more frequent, and it is very rare to see doctors and patients need to negotiate. Despite the different needs for language, Arnó et al. (2006) argue that Dudley-Evans and St. John's (1998) extended and flexible definition can serve as a framework that can encompass various ESP contexts.

Absolute Characteristics

- ESP is defined to meet specific needs of the learners.
- ESP makes use of the underlying methodology and activities of the discipline it serves.
- ESP is centred on the language (grammar, lexis and register), study skills, discourse and genre appropriate for these activities.

Variable Characteristics

- ESP may be related to, or designed for, specific disciplines.
- ESP may use, in specific teaching situations, a different methodology from that of general English.
- ESP is likely to be designed for adult learners, either at a tertiary level institution or in a professional work situation; it could, however, be for learners at the secondary school level.
- ESP is generally designed for intermediate or advanced students; most ESP courses assume some basic knowledge of the language systems. (Dudley-Evans and St. John 1998, pp. 4–5)

This framework outlines the basic and fundamental characteristics of ESP. In order to understand how ESP instructions can benefit from technology affordances, it is important to unpack these characteristics. First and foremost, ESP is designed for learners with specific needs, which means a needs analysis is the most important step in teaching ESP. This point is emphasised by Belcher (2004) in her latest historic review of ESP:

> Unlike other pedagogical approaches, which may be less specific needs based and more theory driven, ESP pedagogy places heavy demands on its practitioners to collect empirical needs-assessment data, to create or adapt materials to meet specific needs identified, and to cope with often unfamiliar subject matter and even language use. (p. 166)

So, broadly speaking, ESP concerns what learners need to know in their professional contexts. In other words, given the particular context in which English is used, the variant of English will change. Therefore, for ESP, the ultimate goal is to tailor language instruction to meet the needs of learners in specific contexts. Addressing learners' needs is referred as the commitment to the purposes of the learners (Belcher 2009) and is shared by all branches of ESP, and it does not only include learners' needs at the language level, but also from material and teacher aspects. According to Belcher (2009):

> What the commitment entails is, (1) first and foremost (before, during, and even after instruction), finding out what learners' needs are, then (2) developing or adapting materials and methods to enable needs-responsive instruction while concurrently (3) acquiring the expertise to function as needs-knowledgeable instructors. (p. 3)

    Second, authenticity is a key feature of ESP. Here, authenticity refers to authentic language materials and tasks. For ESP practitioners, much attention is given to developing authentic materials based on the discourse in the taught discipline. This is also referred as target genre students' need to engage in the real-life work situations.

    Third, closely related to authenticity and learners' needs is the teaching methodology. ESP adopts a learner-based approach; thus, all aspects of learning and teaching are about addressing learners' needs. However it is important to note that learners' needs vary according to the situations they are in, their disciplines and the context in which they work. Their needs are also very much influenced by local culture, their existing knowledge and their desire and motivation to learn.

    Finally, it is worth noting that ESP mainly deals with adult learners who are at intermediate or advanced levels. It is assumed that ESP learners have achieved a certain level of English and are relatively mature; therefore, learners' cognitive and linguistic levels are critical in ESP course design, material development and pedagogical considerations. This is why needs analysis, discourse genre, corpora, situational practice, cross-cultural issues, context and authenticity of communication and materials are important aspects of teaching ESP (Johns and Dudley-Evans 1991; Hewings 2002).

3   Affordances of Technology in ESP Instruction

Technology affordances can be simply defined as potential benefits that technology can bring to the process of teaching and learning. Affordances of technology are well documented in the literature, with different theoretical perspectives focusing on different aspects. Generally speaking, the role of technology has shifted from being a tutor to being tool to communicate due to shifts in pedagogical theoretical position from behaviourism to socio-constructivism in recent years. Technology has been used by ESP teachers for different purposes. For example, technological tools are used to create suitable materials or relevant contexts for language learning (Arnó-Macià 2012), to address learners' needs and to achieve positive psychological impact (Arnó et al. 2006). The fast-growing Internet provides ESP teachers with a new tool to engage students in real-life communication, to bridge the intercultural gap, to collaborate in their professional community and to access up-to-date information relevant to their discipline. I have discussed the general benefits of technology in language learning elsewhere (e.g., Li 2015), and here I will explicitly focus on the multiple roles of technology in ESP teaching and learning.

3.1 Technology Enhances Language Learning

Macaro et al. (2012), in their review, provided some evidence that technology facilitates the acquisition of linguistic knowledge and the development of language skills. Research suggests that multimedia presentation, including graphics and video clips, has a positive effect on vocabulary acquisition (e.g., Kim and Gilman 2008; Silverman and Hines 2009). For example, Rusanganwa (2013) investigated whether the use of multimedia can facilitate technical vocabulary acquisition in physics undergraduates in Rwanda, and the results suggest that multimedia has a large effect on the recall of the concepts taught. Apart from vocabulary learning, technology has also been reported to have improved writing (e.g., Mak and Coniam 2008), listening comprehension and grammar accuracy.

   Closely related to linguistic acquisition is the development of communication skills. Developing communicative competence is the key purpose of learning English and one very important aspect in real-life situations. For example, email is becoming more important for communication than other methods, and being able to communicate successfully and appropriately is considered an important communication skill. Computer-mediated communication (CMC), such as online forums and synchronous and asynchronous communication tools, has become popular in efforts to improve second-language learners' communicative competence. The use of CMC technologies such as emails, online forums and Skype has benefited learners in real-life communication. Research suggests that email exchange encourages students to recognize that L2 is more than just learning vocabulary and grammar but a powerful medium for communication (Warschauer 2000, 2003). Of course, facilitating knowledge acquisition does not only stay at the linguistic level; research studies show value of technology for development of intercultural awareness (Mueller-Hartmann 2000; Ware 2005), especially with CMC and network-based learning (Kern and Warshauer 2000). Web 2.0 technologies develop opportunities to communicate and collaborate even further for people from the same profession from different contexts. Blogs and wikis do not just provide learners a tool to communicate but a space to work together and publish their work.

3.2 Technology Facilitates in Creating Authentic Materials

It is very likely that in many contexts where teachers are teaching those digital natives (Palfrey and Gasser 2008). The development of digital and web materials has enriched learners' experience in the sense that they can gain more authentic input and see how language is used in particular contexts. This is especially useful for ESP, as ESP learners need to learn the authentic language that they can apply in real-life contexts. In language learning, the authenticity of language materials and tasks is emphasised by various researchers, and the use of authentic language materials is encouraged whenever possible. As such, students are not only able to learn

the kind of language they need but also how it is used. The underpinning theory is to experience rather than acquire the language. Designing materials for students' needs is perhaps the very first thing faced by many ESP teachers, in which case teachers are not simply teachers but also material developers, due to the unavailability of the materials they need or the lack of authenticity of the textbook. This task is very challenging for many teachers, and the Internet is believed to serve well the authenticity of the text and the authorship of the language user—the two aspects of communicative language learning (Kramsch et al. 2000). As such, the Internet is considered an authentic resource for natural, context-rich and culturally specific materials (Herron et al. 2002). These materials do not stay at the textual level but also provide rich audio and visual materials that provide learners with multimodal learning experiences (e.g., YouTube). The availability of up-to-date information and tasks in different discourse communities provides both the teacher with authentic language materials and the students with access to the information they need to complete their tasks and projects. As I mentioned before, corpora have been used by ESP teachers to develop suitable materials for their learners. The availability of academic and occupational corpora enables both ESP teachers and learners access to the authentic language used in their targeted context, and, by analysing corpora, what learners need can be addressed.

3.3   Technology Mediates Thinking

Technology can also be used as a mediational tool (Li 2014), especially in network-based learning and computer-supported collaborative learning. Mediation is how people use 'culturally constructed artefacts, concepts and activities to regulate the material world or their own and each other's social and mental activity' (Lantolf and Thorne 2006, p. 79). Language is widely accepted as the primary mediational tool, but nowadays the use of technologies is a new psychological tool that can mediate interaction between humans and the environment around them. The multimodality of technology materials can mediate ideas, thoughts and thinking processes through images, sound and videos. Even in text-based chat rooms, the use of emoticons can help express thoughts and emotions. The mediational role that technology plays in network-based learning is vitally important. Students from different cultures and backgrounds can take advantage of computer tools to represent their thoughts and to bridge the gap in intercultural communication.

3.4 Technology Provides a Learning Environment for Interaction

Interaction lies at the heart of language learning, and technology can provide learners with an environment where they can engage in authentic interaction. In ESP teaching, interaction between learners can be promoted through the use of a particular technological tool, for example, a forum or an online discussion board. The kind of interaction in which students engage in such a learning environment resembles the real-life situation, as the task is genuine and the language is authentic. With the development of network-based learning, project-based CALL (computer assisted language learning) is also popular in assisting students to develop their interactional competence. For example, in a German as a foreign language context, Chun (1994) has argued that the use of network-based activity facilitates interactive competence as learners 'generate and initiate different kinds of discourse, which in turn enhances their ability to express a greater variety of functions in different contexts as well as to play a greater role in managing the discourse' (p. 18).

3.5 Technology Facilitates Self-Directed Learning

In order for learners to become autonomous, they need to engage in self-directed learning. Self-directed learning is also one of the key features of ESP courses (Carter 1983). For Carter, 'ESP is concerned with turning learners into users' (Carter 1983, p. 134). In order for self-direction to occur, the learners must have a certain degree of control over when, what and how they study. Technology in this sense offers a great opportunity to realise self-direction. For example, in a self-access learning environment, students are able to access the learning materials and direct their own learning at their own pace. This not only involves students developing strategies to learn the materials and gain competence in language skills (e.g., listening), but also provides students an opportunity to control their own learning. In this context, technology can 'support self-paced instruction and … support self-paced review of concepts' (Roblyer 2006, p. 48).

3.6 Technology Motivates and Engages Learners

Technology can be used as an effective tool to engage, motivate and regulate learners. In particular, motivation has been core to discussions about technology in language learning in general (Braine 2004; Schwienhorst 2007). Teachers also widely believe that the use of technology enhances student motivation (e.g., Li 2008).

4 Five Principles for Integrating Technology in ESP

Based on the above discussion of benefits of technology, I propose five basic principles in integrating technology in ESP.

4.1 Principle 1: Understanding the Benefits and Roles of Technology

In order to successfully and effectively integrate technology in ESP teaching, teachers need to be aware of the benefits of technological tools for language learning. Technology in general has a positive impact on language learning, but technology cannot be simply added on to teaching or replace the teacher. Teachers need to critically evaluate the role of technology, as different tools have different functions. For example, some tools are more appropriate for developing collaborative learning (e.g., the use of wikis, blogs and other Web 2.0 technologies), whereas other tools are more suitable to help students develop their linguistic knowledge and skills on their own (e.g., the use of software, videos and corpora). Some tools are more useful to help students to engage in real discourse communities (e.g., online discussion forums and social networks), and others are good for identifying students' needs (e.g., corpora). Knowing the affordances of different technological tools helps the teacher to select the best options to achieve their pedagogical goals.

4.2 Principle 2: Linking Technology to Learners' Needs

ESP adopts a learner-centred approach, and learners' need lies at the heart of designing and teaching ESP. In understanding learners' needs, there are three things teachers need to do (Westerfield 2010). Frist, teachers need to understand the learning objectives and the affordances of technology. That is, teachers need to know exactly what the learners need to be able to do in the target language and how technology can help to achieve this. Table 1 provides an example to illustrate how to link technology to learners' future needs.

Second, teachers need to understand the current learners' language levels and expectations. This means that the teacher needs to have a good knowledge about what the learners can do now and what they want from the course. The current knowledge can be assessed through comparing student work and the existing academic or professional work.

Third, teachers need to know the learning environment, including what technological environment they have (e.g., one-computer classroom, network-based classroom, self-access centre or distance learning), available resources (e.g., access to

Table 1 An example of linking technology to learners' needs (Li 2017, p. 142)

What learners need	How technology can help (examples)
Communication skills	CMC tools (e.g., online discussion boards, emails and videoconferencing) can be used to engage students in real-life discourse
Academic writing skills	Corpus analysis of published academic work to identify how to use linking words, reporting verbs and tenses
Collaborative experience	Wikis, project-based CALL
Engagement and participation in a professional community	The use of social networking

computers, Internet and software), students' computer literacy level and their experience in using technology in learning.

4.3 Principle 3: Integrating Rather Than Adding Technology in Teaching

Technology needs to be integrated as part of pedagogy rather than an 'add-on' to the existing teaching. 'Integration' puts the emphasis on pedagogy, which means technology is used to achieve pedagogical goals and teachers need to be aware of their pedagogical beliefs, and research suggests that teachers use technology according to their underlying beliefs about teaching and learning (see Table 2 for an example of writing tasks using technology). Only by understanding their own beliefs can teachers 'integrate' technology into their teaching rather than adding it as a supplementary tool.

'Integration' also means that technology is integrated in assessment. For example, for each pedagogical goal, teachers need to have a reliable, measurable and clear assessment method. Mueller (2010) calls for authentic assessment, which means real-life tasks that demonstrate meaningful application of essential knowledge and skills. For example, email tasks with different purposes could be used to develop students' (internal and external) communication skills.

4.4 Principle 4: Considering the Role of the Teacher

When technology is integrated in teaching and learning, the role of the teacher will be transformed as a consequence. Clearly, one of the factors influencing teachers' use of technology innovatively is the understanding of the teacher's role. Teachers need to be aware of different roles they perform when different kinds of technology-supported activities are implemented. The challenge for teachers is to give control to learners and explore their agency in learning. Technological tools in many situations can be used to assist learning, and the teacher needs to realise the supportive

Table 2 An example of teachers' pedagogical beliefs and the use of technology (Li 2017, p. 143)

Teacher's pedagogical beliefs	Main technology use
Writing is a means of reinforcing speech patterns (product based)	Doing grammar and vocabulary exercises on a website
	Using feedback tools (e.g., marking or track changes in Microsoft Word) for peer reviewing, focusing on local feedback, such as tense, spelling and grammar.
Writing is a process of constructing personal meaning (process based)	Accessing Web database
	Composing with the word processor
	Using mindmap tools
	Participating in collaborative web-based writing projects
	Using prompted writing and grammar software in small groups
Writing is an important academic and professional skill (content based)	Using corpus to analyse academic and professional discourse
	Using academic and professional websites
	Using online referencing sites (e.g., dictionaries and libraries)
Writing is a text understood by individual readers.	Using blogs and wikis
	Participating in online discussion (e.g., wikis, blogs)
	Participating in email exchange

Table 3 Teachers' Roles (Adapted from Li 2017)

Teacher role	Activity	Technology
Organiser	Students work together on a collaborative writing project	Wikis
Audience/reader	Students presents their views and opinions about topics in their field	Blogs
Guide	Students develop a vocabulary project for their discipline	Corpus
Participant/facilitator	Students initiate and participate in discussion	Online forum
Evaluator	Students produce oral and written work (with multimodal materials)	Digital recording software and Microsoft Office package

role of technological tools. In this learning situation, teachers needs to explore how they support and facilitate this learning process rather than trying to be the controller of this process and the absolute knowledge provider, as in traditional knowledge-transmission classrooms. Table 3 presents examples of different roles teachers might perform in different activities when various technological applications and tools are used.

These are just some examples of roles and possible technological tools in teaching and learning. Of course, teacher's roles cannot be restricted to those mentioned above and can change depending on the students' situations and tasks.

4.5   Enhancing Authenticity of Both Language and Task

Technology must be brought into the process of teaching and learning to address authenticity—both at the language and task aspects. Teachers can use technology as a tool to access authentic materials to prepare teaching so that students experience and learn the authentic discourse they are expected to encounter in their profession. Teachers should also use technology to increase the authenticity in learning tasks. These tasks should resemble the kinds of tasks students are expected to carry out in a real-life work environment, for example, discussing a project with a senior colleague or solving a problem with colleagues. Technology can give students an authentic environment to some extent; for example, in Second Life, law students can have a virtual courtroom and business students can do virtual business.

5   Integrating Technology in Teaching

In this section, I present some ideas for using technological applications in teaching English for specific purposes. These ideas can be approached from perspectives of the disciplines, the learners and teachers, language skills and technological tools. Since these ideas can be applied across disciplines and involve different language skills, I chose four different kinds of technological tools to explore how they can be integrated into teaching and learning.

5.1   Corpus

In many academic writing contexts, vocabulary acquisition and grammatical structure appear to be important features, and many investigations have been carried out in these areas to assist learning English for academic purposes. In recent years, data-driven learning (DDL) has become popular. DDL is an approach which is rooted in corpus linguistics. Friginal (2013) suggests that the 'future direction of teaching writing for specific purposes will include corpus-based textbooks, materials and data' (p. 209).

A corpus can be defined as 'a collection of texts, written or spoken, which is stored on a computer' (O'Keeffe et al. 2007, p. 35). Two basic functions can be identified with a corpus:

Fig. 1 An illustration of using concordancing for EAP

- Concordancing: The most basic and commonly used function of a corpus data-
  base is the 'key word in context' feature, which shows how a searched word is
  used in the corpus. For example, the verb *suggest* is searched using Corpus
  Concordance English (v 6.5)[1] with AA Academic Abstracts, which contains the-
  sis and dissertation abstracts at the master's and doctoral levels written by English
  native speakers (174,000 words). The results show how *suggest* is used for aca-
  demic purposes (Fig. 1).
- Bar graph display: This provides the frequency a word is used.

There are various free corpora available on the Internet for use, and these data-
bases provide searchable text samples of writing across academic disciplines and
registers. For example:

- British National Corpus (BNC)[2] (100 million words).
- Corpus of Contemporary American English (COCA)[3] (410 million words).
- Michigan Corpus of Academic Spoken English[4] (1.8 million words).
- Michigan corpus of upper-level student papers (MICUSP)[5] (16 disciplines at 4
  levels of 7 paper types with 8 textual features).
- Hong Kong Engineering Corpus[6] (9.2 million words).

Yoon (2011) suggests that a corpus has two functions that assist in writing: as a research and a reference tool. EAP teachers can use a corpus to search for vocabulary usage as demonstrated in Fig. 1. A corpus can also be utilised as a reference tool for students to solve writing and language problems. This can be done through concordancing for linguistic reference in terms of collocations and lexico-grammar and for revisions of their writing, particularly self-correction of errors. Students can compare their essays with a corpus to do revision after a teacher has highlighted the problems (e.g., Gilmore 2009).

The corpus can be used to assist academic writing. For example, Friginal (2013) investigated the use of corpora to develop the research report-writing skills of college-level students enrolled in a professional forestry programme in the United States, in particular focusing on a set of selected linguistic features: linking adverbials, reporting verbs, verb tenses and passive sentence structures. Students' work was compared with published forestry articles to find differences in these areas and subsequent treatment was offered to students to improve in these areas. The study showed the positive impact of using corpora to address students' writing problems, including the use of linking words and reporting verbs. Students can identify the linking words and reporting verbs from their own writing and check how they are used in the academic writing corpus. This can be done either in class or outside class. A similar study was carried out by Hafner and Candlin (2007), who made use of a corpus of about 800,000 words from 114 legal cases to provide online writing support for law students when they drafted their legal texts. In this way, students were able to understand how to use legal vocabulary more appropriately and accurately, hence improving writing overall.

The corpus can be used to study key vocabulary in an ESP course. For example, students can check and discuss how the top 100 key business vocabulary words[7] are used in context. This would enhance the authenticity of vocabulary acquisition. That is, students do not learn these vocabularies alone but understand them in contexts. This could be a task outside class and each student can be responsible for two to three words and present them in class. In this way, students do not just engage in independent learning but also learn from each other.

Corpora can be used by teachers to develop materials for students. Nelson (2003) pointed out in *The Guardian* that his analysis of business English suggests that

> …the use of verbs was central to communication in the materials: There were fewer verbs and a much greater concentration on nouns … This may represent a narrower base of business activities in the materials, or it may reflect the predilection of materials writers for naming aspects of business, as opposed to writing about the language needed for doing business. (p. 1)

Thus, teachers can use real corpora to design authentic materials for students that they will find later on in the real world. In another case, Evans (2012) designed email tasks for business English classrooms by analysing data from Hong Kong's service sectors, including 50 email chains comprising 406 separate emails. He rec-

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[7]The top 100 key business words can be accessed through Mike Nelson's Business English Lexis Site at: http://users.utu.fi/micnel/business_english_lexis_site.htm

ommends a simulation-based approach in designing email tasks in which students are given 'clearly defined and differentiated roles in a particular business context, and a task that stimulates collaboration and conflict, both internally and externally (p. 210).

5.2 Web-Based Materials

The Internet is a useful material site, especially in addressing learners' needs for authentic materials. There are many interesting EA/SP websites, which can be used to help teachers to prepare their ESP lessons. From these websites, the teacher can access many real-life examples; for example, Freed's ESL/EFL ESP website (http://www.eslhome.com/esl/esp/) offers a range of topics, including English used for business, medicinal, banking and finance, dentistry, engineering and science. For each category, there are several of useful links which users can explore for either getting materials for lesson or self-study. ESP on the Web is another website (http://www.unav.es/espSig/esponweb.html) that contains materials for teachers and learners in ESP. It provides different categories of ESP, including ESP associations, resources, discipline-specific sites and articles on the web. From here, teachers can guide students to explore resources in their discipline; for example, project-based learning can be implemented using these websites.

To develop autonomous learners, these websites can also be used by students for independent study, especially in revising and expanding their knowledge in the discipline. From these sites, students can also access the discourse of the community and participate in activities.

5.3 The Use of Wikis for Collaborative Writing

A wiki is defined as a 'freely expandable collection of interlinked Web pages, a hypertext system for storing and modifying information—a database, where each page is easily edited by any user with a forms-capable Web browser client' (Leuf and Cunningham 2001, p. 14). Wikis serve as powerful mediating artifacts for collaboration (Lund 2008), as wikis facilitate participants to 'collaboratively generate, mix, edit and synthesise subject-specific knowledge within a shared and openly accessible digital space' (Wheeler et al. 2008, p. 989).

A wiki can be used as a collaborative tool for an ESP project. Students can work collaboratively to create a discipline page or a project. For example, students studying law could have a wiki page about international shipping law where they do not only collaborate with their group members to co-construct knowledge but also invite people outside to contribute to their page. This kind of collaborative activity is not restricted by place and time. Wikispaces (www.wikispaces.com) is a wiki engine where teachers or learners can create their own wiki pages.

A wiki can also be used for academic writing purposes. Research suggests that writing on the wiki can contribute to raising awareness of the audience and to increasing the use of interpersonal metadiscourse (Alyousef and Picard 2011; Kuteeva 2011). When students co-construct texts, they do not only focus on what they want to write but also on understanding other members' perspectives. In this way, develop an awareness of their audience; this perfectly matches a reader-focused writing approach. For example, in English for legal purposes, students could be writing a report about human rights together.

A wiki project can also be used to help students collaboratively solve writing problems (e.g., Li and Zhu 2013). In the writing process, students can be guided to use a 'discussion' page to discuss issues they encounter and support each other to solve problems. Because students can view a 'history' page, they can see what revisions/changes have been made and critically reflect on their own writing.

5.4   CMC

Computer-mediated communication (CMC) is an interaction that takes place in real time in which users negotiate meaning through either verbal or written language. Email is an example of a CMC tool that is relevant to all disciplines. Nowadays, sending and receiving emails is an essential skill for all employees to exchange information, conduct negotiation and work collaboratively (Angouri and Harwood 2008). Studies in the ESP literature have also emphasised that email has become an integral part of organisational communication (Louhiala-Salminen 2002; Louhiala-Salminen et al. 2005). Evans (2012) indicates that

> email plays a crucial role in binding together flows of internal and external activities that are directed towards the resolution of problems, the formulation of plans or the execution of decisions. Email is thus an important means of working towards these goals, enabling professionals to exchange and discuss information and ideas quickly and conveniently with colleagues and clients. (p. 210)

In ESP teaching, email tasks can be designed for students through email analysis (see Evans 2012). For example, in a business course, email can be used to address the issue of lack of intertextuality in traditional business textbooks and to raise business students' awareness of writing as an ongoing and dialogic process (Evans 2012). By analysing emails in authentic contexts, students can identify the differences between email writing and other types of communication (e.g., letters and face-to-face conversation). Langauge teaching can focus on style and register, and, as a result, pragmatic and cultural awareness can be raised in the communication.

6 Discussion and Conclusion

Computer technologies can benefit language learning in many aspects, but these benefits depend on how teachers use them. In the process of integrating technology in ESP teaching and learning, there are five areas that merit further discussion and research.

The first issue involves teachers' pedagogical beliefs. Warschauer (2004) suggested that 'teachers will make the best use of computers in the classroom when students are encouraged to perform the most real tasks possible, taking the advantage of the power of modern ICTs to try to change the world in ways that suit students' (p. 24), and this chapter further emphases this view. It is perhaps important to enrich teachers' technology-enhanced pedagogy so that teachers feel comfortable and confident in letting students take control in learning and engage in active participation. Obviously, this requires teachers to have sufficient knowledge at the pedagogical, technological and contextual levels.

A second issue, which is closely related to this, is teacher training and learning in terms of pedagogy and technology. We must acknowledge that integrating technology does not mean that we 'add' technology whenever is possible. This requires teachers to have systematic knowledge about the role of technology and how they can match affordances of technology to their pedagogical considerations. Therefore, teacher training or development becomes a critical issue. Research suggests that a case-study approach is useful because teachers can learn from their peers in real practice about the integration of technology. Therefore, communities of learning may be a good way forward in terms of teacher learning and development.

Third, we all know that technology is developing at a rapid rate, and a large amount of free material has been produced for language learning. On the one hand, it is great for teachers to have access to various types of language materials. On the other hand, the rapid growth of online material makes it difficult for teachers to choose the right resource for their students. In this environment, almost 'all teachers need to know how to use the Web as a resource for current authentic language materials in written, audio and visual formats' (Chapelle and Hegelheimer 2004, p. 305). It has been increasingly important therefore for teachers to evaluate these materials systematically before they adopt them in classrooms. (Chapelle and Hegelheimer 2004; Fotos and Brown 2004). One aspect of teacher learning and development should therefore focus on the frameworks or approaches to effective evaluating materials. In the literature, there are existing frameworks a teacher can adopt (e.g., Chapelle 2003). Nevertheless, teachers need to take the contextual factors into consideration in evaluating e-learning materials, in particular learners' needs, characteristics, learning styles and their preferences, pedagogical purposes and ease to use (Li 2017).

The fourth issue is appropriate assessment. When considering integrating technology in ESP instructions, teachers need to reconsider how they assess and evaluate learning. For example, it is inappropriate to use the existing and traditional assessment methods to evaluate individual performance when learning focuses on collaboration, negotiation and participation. In this respect, peer assessment and

group assessment may be help and useful. Equally, assessment content may need to include digital literacy rather than just linguistic forms.

The final issue is learner training. Research has suggested that preparation of learners before using DDL is key (e.g., Hafner and Candlin 2007; Sripicharn 2010). Therefore, in implementing DDL, it may be important to train learners to compile a corpus so that they are in a position to be able to better interrogate a corpus in terms of what it can be searched for. In preparing learners for using technology in learning, researching preferred learning styles is a crucial factor influencing the effectiveness of the technological tool (e.g., the use of a corpus) (Cresswell 2007). There are of course other aspects worth exploring, but pedagogical relevance, authenticity, technology benefits, learners' needs, teachers' beliefs and teachers' roles are the most important principles that guide technology use in ESP instruction.

This chapter also considers the various benefits technology can have in language learning and outlines some suggestions and practices in how technology can be integrated in teaching ESP in general, drawing both literature review and my own practice. Of course, this chapter is only one glimpse of what technology can do and how we can use it to facilitate better learning. Many innovative ideas can be explored through working out principles for individual teachers' contexts.

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Using Technology in the Teaching of ESP: Some Reflections Based on Practice

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Abstract This chapter aims to provide an overview of the most commonly used and basic educational technologies in the language classroom. We have focused on those which are common to the three educational university settings the authors represent: the United States, Spain and Denmark. Starting with academic management systems such as Blackboard, we mention advantages and challenges of these and other software resources, such as Turnitin®, that can be found within those management settings. As plagiarism is an issue in academia, the aforementioned programme detects copying conflicts and provides the tools to correct them. Another key aspect of new learning environments is student interaction and participation, and that is the main purpose of Educlick, an application that has been specifically created for in-group interaction. Finally, smartphones uses in the classroom and audiovisual materials are broadly revisited. These technical and technological devices will also help to cover most students' different needs in the class, as software is flexible and can adapt to various circumstances.

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1 Introduction and Context

The moment this information about technology is printed, it is immediately out of date. In a field that is constantly being updated, the readers will undoubtedly have information to share as to how even newer applications and software can be utilized in the ESL environment, and more specifically, in the teaching of Academic English and English for academic purposes (EAP). The ideas of planned obsolescence and technological innovation create an ever-changing panorama in which time goes counter clockwise if we want to keep informed and up to date. In the meantime, here are some ideas that will hopefully persevere in the higher education arena.

The purpose of this chapter is twofold: In addition to the technological suggestions mentioned above, we are also trying to offer pedagogical solutions for the so-called 'attention to diversity' issue. In ever more heterogeneous student groups, teachers have to find and create learning opportunities that are suitable and challenging for all learners. Technology and apps are multi-faceted resources that help practitioners in their daily teaching tasks. Therefore, being conscious of their advantages and possibilities opens up new ways of teaching/learning and also new challenges we all have to be aware of.

2 Heterogeneous Classes, Heterogeneous Teaching

The context in which this paper is inspired is a group of learners of English for academic purposes. The learners' processes of learning are varied in nature, as students' contexts and needs also vary: Some have higher English levels than others, some are native speakers of English and their various degree of motivation may also have an impact on their learning. In an academic context, we can find a parallelism with Krashen's (1982) idea of distinguishing between acquisition and learning of a language. It seems that when we study a foreign language, what we do is talk *about* it, discussing grammatical aspects such as irregular preterites and its subordinate conditionals. Learning and acquiring a language goes beyond that grammar surface; it goes into practice and uses in context. Krashen, with his term *acquisition*, points out the importance of 'gradual development of linguistic skills by using it in communicative situations' (Yule 1996, p. 191). With a heterogeneous group of learners, we find instances of learning, of acquiring language and *about* language at the same time.

In this process of language learning, classroom diversity is evident. Students' learning styles and learning goals and motivations differ from each other (Hjörne and Säljö 2014). As we are working with a heterogeneous group of undergraduate students in our respective institutions (U.S., Spanish and Danish universities), some of our learners aim to become English teachers, while others want to be researchers, translators or public relations experts. Moreover, some students might have special difficulties or needs when approaching the contents of a teacher's explanations in

class. In this regard, our pedagogical aim was to find a common denominator and motivating element for the whole group. Digital competencies, applications and software prove to be key instruments in the development of technological abilities, and at the same time, they inspire learners and encourage them to play an active role in the class (Alexander 2014; Peterman et al. 2014; Zhao et al. 2014).

Learning long lists of irregular verbs by heart is far from the pedagogical interest of someone who needs to develop their L2 oral skills. On the other hand, writing essays or interacting with others in forums or chats might be within the language and communicative interests of a certain group of students. Some learners want to learn a set of basic structures from which to make generalizations in any given situation, but others need to go deeper than that because of their higher level. In a classroom with so many levels, backgrounds and purposes, student interaction in a foreign language triggers improvisation and creativity. Communicative approaches in the teaching and learning of English as a foreign language do not stress mnemonic techniques based on the repetition of certain patterns; the students' purposes and contexts of foreign language use are what stimulate interest in these approaches.

3   WebCT, Blackboard and Other Academic Management Systems: Impact in the Classroom

The teaching of English for academic purposes at university levels implies working with groups of students with heterogeneous language abilities. In order to cope with all their needs and levels, technology provides a shared virtual and blended-learning space where collective learning can be facilitated. These types of technological programs have been around for decades and are helpful in many ways, from discussion boards to posting reference materials for computer access to pointing students toward online links. With the understanding that most ESL instructors already know about Blackboard and similar university-wide programs, other technology can be investigated for use in the ESL/EFL classroom. Academic management systems are meant to open up new communication and organization channels between teachers and students and among students themselves (Carvalho 2011). Tracking options allow practitioners to monitor and assess, when necessary, students' interactions, interventions in forums, chats, wiki activities, etc., which are valuable if we want to implement formative evaluation during the course.

With online management systems, teachers can assign certain readings, listening exercises or even videos for students to work on at home. Then classroom instruction can be used for other purposes and through other interfaces. In addition, students can work at their own speed and can submit papers and even take assessment tests online. Using chats and discussion boards allows students to contact each other, share each other's ideas and writing samples, and post questions based on the readings and homework assignments. Great advancements in this area have been made by distance learning, where individual students from various locations around

a state can conduct a class by a lecturer at a set time and a set place. Student sign in, and the professor can 'talk' with each student in their own location to answer questions or offer feedback.

One major advantage to using this type of academic management system is in posting student assessment (Garrote 2012). Students simply log on to the program to see their own grades and to follow their own progress. Students can see what homework is missing and can submit assignments directly to the professor. Reserved readings can be a link away, and work can easily be conducted from home. Instructors can also track how many minutes or hours students have logged in to certain websites in order to monitor progress.

While Blackboard seems to be the ubiquitous program, other newer options are becoming available. Haiku, used at the Hockaday School, offers a teacher-share option, whereby instructors can see deadlines and projects assigned by others. Students turn in wiki projects and have immediate information concerning due dates and progress. Haiku offers options for inclusion of lectures on video, links to websites and other easily accessible learning tools. On the other hand, electronic software such as Mahara is providing an innovative perspective on portfolio evaluations. Mahara is an example of a learning 2.0 environment where each student can upload a learning diary with their learning progress. At the same time, these diary entries can optionally be shared with other group members, and they can be illustrated with photographs, videos, audio files and text. Knowledge is constructed collaboratively as students can work together in a very appealing environment: Texts are editable, flexible, and the working surface is 100% personalized. Learners can customize their blog space easily and thus be able to share it with others. A learning space that each student can control gives them a sense of responsibility, autonomy, and commitment that strengthen their content acquisition and learning-by-doing skills. These programmes are accessed via the university online campus, but they are also free and open source portfolios which can be downloaded by any user online.

The teaching philosophy of openness and social constructivism that is present in the aforementioned activities accords with the idea of open software being a free and open source. These management systems are being continually improved and modified by experts around the world who are members of an open source-initiative community. Those modifications are in line with the specific needs of learners of academic English. In this case, working constructively offers the perfect ground for language skill practices, both for oral and written abilities. As far as oral language skills are concerned, Mahara makes fluent interaction possible by means of online videos and dialogues. Wikis facilitate written interaction among students while boosting proofreading and text editing, all indispensable techniques for academic English proficiency. At the same time, a teacher can access students' work and progress at all times and thus monitor their performance.

With such individualized access and contact between a teacher and each of the students, instruction and feedback are personalized, ensuring that each learner receives and produces exactly what is expected. Online platforms provide a wide range of resources for teachers to appropriately cover and attend to, as they include tasks students can perform differently according to their own levels. These tasks can

be graded accordingly and are good teaching techniques to manage diversity in the classroom. An example of this is a wiki activity, or a forum, where learners are free to make written contributions on a given topic: depending on their level, students participate with longer or shorter paragraphs, including external references, more difficult vocabulary, quotations etc. By using their own strategies and previous knowledge on the subject, learners can reveal what they know, and the teacher can provide quick and personal feedback.

Multiple learning styles were the research antecedents for Gardner, who was Harvard's supporter of learning theory and author of *Frames of the Mind.* This psychologist elaborated the theory of multiple intelligences in 1983, advocating individualized and more motivating learning processes, which consequently bring better results. Gardner's theory of intelligence is that it is not a fixed entity, but rather, as Gow calls it, 'a bundle of specific intelligences... that are variously mixed in individuals and that can be capitalized on in the design of school curricula' (Gow 2009, pp. 45–46). Gardner's (1983) suggestion that we learn through various stimuli, such as music, tactile expression, logical-mathematical reasoning, interpersonal and intrapersonal relationships, natural/environment, word games and spatial concepts. These are all very different elements that play a significant role in learning theory, which promotes learning according to each student's inclination and preference. In his earlier research, Gardner challenged educators to capitalize on students' strengths by varying the way teachers present lessons in class, and since that time, we have paid attention. Gardner's suggestions have taken hold, and teachers are expanding on his research into how people learn. Emotional intelligence is the most recent addition to this bundle, which proposes to explain why we need to analyze learning and children's behavior in the realm of education. Technology lends itself to this recognition that not all learn in the same way.

Within such a multilayered academic setting, Gardner's theory of multiple intelligences offers practitioners a wide range of materials to use and activities to do in order to increase students' motivation. Each of the intelligences mentioned by Gardner and subsequent writers is needed in the foreign language classroom in order to achieve proficiency: songs, musical videos in English, role-play activities and drama plays, number learning and easy mathematical and logical operations, individual activities and group work, environmental topics, riddles and tongue-twisters, spatial and orientation activities etc. The aim is to look for student motivation, as this is considered the main power force in learning. By finding students' different centers of interest in the four communicative skills (listening, reading, speaking and writing), new and more motivating habits can be implemented in the teaching/learning process: 'the higher the interest, the higher the motivation; when motivation is higher, learning results are better' (Montijano Cabrera 2001, p. 33).

4 Turn It in/Turnitin®, Ephorus and Other Ways to Detect Plagiarism: The Threat of Copying in Academic English

Plagiarism has always been a major problem for students writing academically (Karabag and Berggren 2012). The first difficulty they have to overcome is the concept itself: What is plagiarism? And then, once they understand that it is a copying issue, why is it illegal? Conceptually, copying others' ideas has never been seriously punishable in students' academic life so far; however, ideas are valuable and even more so in an individualized academic environment, where learners' uniqueness is carefully monitored and assessed. In order to facilitate instructors' correction tasks, specialized software has been created which has radically changed the way teachers assess student expression.

Originally used as a tool to monitor plagiarism on university campuses, Turnitin® software has evolved into more of a preventative tool than a punitive one. In the earlier phases of use, professors take submitted papers and run them through the Turnitin® software, which flags any phrases that were copied from Internet sources. That is, any three words or more in consecutive use are highlighted, and instructors can then show proof that a research paper was not written completely by the student. This would flag the copied material in the students' papers with color-coded script, and the students would automatically be failed for violating the rules. Depending on how the instructors use this program, it can identify the extent to which students need help with utilizing their research and synthesizing ideas in their own writing.

Over time, professors have begun using Turnitin® more as a self-help tool, in that the students themselves are able to monitor their own work and make changes accordingly. The goal, of course, is to have students be aware of linguistic tools to prevent plagiarism by teaching proper citation through footnoting, by practicing paraphrasing or by using proper punctuation of words and ideas from resources.

Plagiarism has been an issue in English-speaking countries, in some cases even being policed and fined at universities and having serious legal consequences. In some other countries, plagiarism is now being considered an issue that is worth paying attention to. If we extrapolate these writing and citing difficulties to a foreign language class, we will find both formal and linguistic barriers in students' L2 productions. One of the responsibilities of an ESL/EFL classroom in the United States, Spain and Denmark (the three countries where the authors work) is to equip international students to the rigors of university instruction, and being aware of plagiarism is accompanied by protocols to use research in appropriate ways.

Also helpful in this regard is Ephorus software, which also assists in preventing plagiarism in institutional environments. In particular, Ephorus identifies improper uses of online information, as the Internet offers both new possibilities and new dishonest purposes. In this case, not only does Ephorus provide a framework for avoiding plagiarism, it also enables content writers to protect their work by checking possible copied fragments in other documents. What Ephorus does is to give access and compile different learning environments, text databases and online educative platforms (e.g., Blackboard, Smartschool, Trajectplanner and many others)

and then compares the text we want to analyze with the ones that are present in these databases.

These script scanners, and others of the same kind, contrast the uploaded documents with billions of Internet resources, previously submitted essays to your university and others which also work with these platforms, as well as other informational texts such as newspapers, web pages, journals and magazines. Although these programs may originally have been created for examination boards, supervisors and teachers, they are now open to undergraduate and graduate students, which is an expansion of their learning possibilities. In this manner, unintentional plagiarism can be avoided by students themselves, who can monitor and modify their writing while they are working on the text. These monitoring programs help learners commit to quality and originality as they learn the importance of ideas and personal work.

5   Clicker (Educlick) and New Ways of Classroom Participation

Classroom participation is something hard to manage, or even obtain, in certain groups of students. Sometimes students do not feel confident when they have to give their opinion or discuss a topic in a foreign language public forum. Educlick provides new communication channels in these types of classroom situations, as well as rapid and agile exchanges between teacher and students during the class.

Not only are Educlick and other clicker software used for taking attendance in large lecture settings, they are now utilized in many classrooms as a survey device, among other uses. Clickers are exactly what they sound like: small hand-held devices with buttons on them (they have the physical appearance and the technical function of a TV remote control). Some university departments buy a set of clickers for student use, while others make students buy their own clicker (USD 10–15) as part of their textbook requirements. A typical example of clicker use is for ESL teachers to make PowerPoint questions—usually multiple choice—and then have the students record their responses anonymously using a clicker. Within seconds, the teacher has a breakdown of responses and can show the results in graph form to the class. This prompts discussion and assists the instructor to gauge understanding of key concepts.

A more recent advancement is the use of smartphones as clickers. Using a Website (www.connectanywhere.com), students can access the application for free. Students can join a session with a code given by the instructor. Clickers can be used to monitor student attendance when Educlick participation is not anonymous, which is another option for formative evaluation in a course. In large groups, these devices offer students the possibility of expressing their opinions and answers to teacher-posed questions in class.

6   The Possibilities of Smartphones in the Classroom Conducted in Academic English

Smartphones are as present as pencils and pens in the classroom, if not more. Sometimes smartphones work as information resources while the teacher is explaining or during group work in the class. Some students take notes on their mobile devices and have their textbooks on them. In a class conducted in academic English, smartphones offer extra support for both written and oral skills; it is therefore advisable for instructors to know all technical possibilities of smartphones in order to make the most of them with the students.

Smartphones can be used to help with speaking skills in and out of the classroom, providing opportunities for oral work and pronunciation practice. Depending on the size of the class, teachers can use voice memos on handheld devices to spontaneously practice individual responses. A popular exercise with small groups of students is having them face the wall and orally respond to a question posed by the teacher. Students then send the instructor their voice responses to which the instructor can listen later and respond. Obviously, this is time consuming for teachers with large classes, but it offers an opportunity for individual feedback for content and intonation or simply for practice speaking.

New apps on smartphones also enable transcription of speech, which can be used for clarification and to earmark the suprasegmentals that students need to practice in pronunciation (intonation, rhythm and pauses). The reverse can also be done: Scripts can be highlighted and converted to voices, male or female and with varying dialectal differences. All this opens up new technical possibilities that convert into teaching possibilities in the classroom.

Mobile applications can also facilitate classroom integration for disabled students. When considering students with visual and/or aural impairment, the use of smartphones, which can be easily handled individually from their desks, reveals a revolutionary approach towards special education needs. Syllabi can be therefore adapted to multiple learning needs in the classroom, manipulating contents, activities and even evaluation procedures to facilitate curriculum access by those learners having learning differences. When considering academic objectives for learning English, mobile devices act as technological helpers for students, who can use online dictionaries, translators and academic corpora to improve their oral and written skills.

7   Video and Movie Clips and Their Pedagogical Implications

The language of videos and movie clips is the current audiovisual mode of communication for students worldwide. They record themselves and others and then upload the final results onto YouTube or similar video channels online as a way of sharing what they do, know and have. From a language teaching perspective, we believe there are infinite possibilities of introducing these multimedia resources into the classroom in order to motivate students to participate actively in lesson development and practice.

There are many excellent suggestions for using videos in the ESL classroom. One quick, easy method for practicing speaking and pronunciation is to choose an action-packed scene from a movie, mute the sound while showing it, and allot 10 min for a brief practice of a specific grammar structure that has been presented. Students are told to form two parallel lines: one line with their backs to the movie screen and the other facing their partner and the screen. The students looking at the video describe the action as the partners listen and ask, 'What are they doing now?' or 'What are they wearing?' After a given time, the lines change positions and partners. This technique can also be used to give oral summaries, predictions about what will happen next in the video, or even written practice based on the given scenes.

Many intensive English programs use audio lectures to evaluate students' listening comprehension. In these cases, the lower level students practice understanding and memory retention by first looking at the test questions, then listening two times to a short academic lecture or conversation (2–3 min) and immediately filling in the answers to the multiple choice test. At the intermediate level, vocabulary is practiced and often defined, the lectures are longer, and the students are tested with both multiple choice and true/false questions. At the upper level, students learn note taking with lectures up to 12 min long, and the test questions are more open ended. Students can practice at home with a set of practice packets that are provided through online 'lab' links. The skill of understanding an academic lecture in a second language should be practiced and does improve with more exposure to both audio and video software. Content-based textbooks often include supplementary DVDs and links to support the readings in a given chapter.

8 Some Ideas on Speaking Assessment Methods

Oral skills have been always neglected in the EFL classroom. Teaching and assessing speaking and listening have been difficult and challenging for most teachers, who prefer to focus on written abilities. Once more, technology comes to the rescue by offering tools and room for uploading, recording, and evaluating speaking and listening tasks. Learners can record themselves and then upload their files to the virtual platform, where teachers can have permanent access to that output. Likewise, having all listening exercises at hand facilitates students' listening practice, as they can listen and work on the tasks whenever and as often as they want.

Simulating the speaking assessment of the TOEFL is another way to assist students in their oral skills development. Using a speaking rubric to evaluate a student's skills is less subjective, and many English programs are going in that direction. Videotaping or audio taping is helpful in cases such as when a 3-min presentation to assess a student's capability of graduating to the next higher class level. Software (e.g., Dragon NaturallySpeaking) can be used by ESL instructors can get a transcription document of a student's presentation with a break-down of academic writing list words and any other specified profiles.

9   Concluding Remarks

A combination of the previous learning styles and technological implementations results in different subgroups complementing each other. These diverse groups are all linked by a shared need or willingness to learn English. All students can benefit from others' experiences, bringing their own significant perspectives to the whole group: Some students give support to other students, and the latter can provide alternative views and approaches to contents and activities. In this regard, a series of challenges and possibilities arise as materials are explored in order to satisfy the final goal in language teaching: communication at all levels.

As for the teachers, these technological implementations might also produce anxiety and uncertainty if instructors do not feel confident in the use of the pedagogical tools mentioned above. Teacher training and technical awareness are the key to success. Teachers in all fields of instruction must keep in mind that computers and related technology are only tools for learning. If a tool is time consuming or if it causes frustration for the students, the tool needs to be reevaluated. However, technology in the classroom can save time, enhance instruction and engage our students if used appropriately.

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Independent ESP Learners: The Case for Blended Learning

Renia López-Ozieblo

Abstract The current educational system has been criticized for not answering the needs of the knowledge-based society (Robinson, Changing education paradigms. Accessed 14 Nov 2016, from http://www.ted.com/talks/ken_robinson_changing_education_paradigms, 2010; Bates and Sangrà, Managing technology in higher education: strategies for transforming teaching and learning. Wiley, San Francisco, 2011). At the same time, the demand for massive open online courses (MOOCs) is increasing fast. After describing the different instructional options available online, we argue that MOOCs are not the optimum solution for ESP educators, whose role is to help learners communicate in the second language independently as well as to develop their critical and creative thinking. Instead, we advocate a methodology that combines a face-to-face approach with the use of information and communications technology (ICT), which is referred to as blended teaching, and in particular a flipped classroom strategy. This has the benefit of maintaining social interaction, which is key in the learning process (Vygotsky, Mind in the society: the development of higher psychological processes. Harvard University Press, Cambridge, 1978), in the classroom and in online development. The chapter closes with a number of practical examples as to how to ensure successful implementation of online social interaction.

Keywords MOOCs • Blended learning • Flipped classroom • Vygotsky • Role of the teacher • Independent learners • Social tools • Discussions

1 Introduction

It has been said that depending on the context, the objectives of the educator will differ and so will the processes used (Halliday 1994). In an experiment where rural mothers and teachers interacted with children trying to complete a puzzle, Wertsch (1985) described how rural uneducated mothers, whose objective was task

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completion, guided the children with specific directions as to what piece to put where. Teachers, on the other hand, provided strategies to allow the children to solve the puzzle at hand and any other puzzle (Lantolf and Appel 1994). The same is true of second language education: When the objective is productivity, the educator tends to drill the student on how to do the task as efficiently as possible, but if the role of the educator is to enable discovery, then the process is a guiding one. So far, online learning seems to have focused on the first type of education.

We talk about second language acquisition (SLA) and with it the need to acquire 'skills', but it could be argued that most of the skills the SLA students are supposed to acquire should already be there, albeit in a slightly different format, from their knowledge of their L1. If a student is capable of transforming a thought into intelligible speech in their L1, the chances are they will also be able to do the same in the L2, as long as they have the necessary tools to do so. However, there is a second element to be taken into account which relates to pragmatic skills. Very often, in ESP, these skills get left behind, so students are able to produce technical speech but not to integrate it with the correct social context (such as small talk previous to a business meeting).

The objective of ESP educators has to be to allow students to communicate successfully in the second language in a variety of professional contexts. The second language is but another system of symbols that has been codified by another society, different to the one the student knows. Learning the codified system is akin to a productivity task: It involves learning the correct vocabulary, the grammatical rules, the phonetics of the new language and also the pragmatic guidelines that dictate how those signs are to be used. Vygotsky described signs as a psychological tool that, together with other resources such as diagrams and algebraic symbols, 'serve as mediators for the individual's mental activity' (Lantolf and Appel 1994, p. 7). Autonomous students are able to do most of this by themselves. Online information and communications technology allow a motivated student to do that, and the results can be very impressive.

What then is the role of the educator? It is often said that it should be to motivate the students; of course, the teacher affects the motivation of the students and is able to influence the interest of the student in the subject, but this ought not to be the primary role of the teacher. We maintain that the ESP educator is there to guide or even teach the student how to adapt their existing skills, those acquired in the learning of the L1, to understand and use the new code of the L2, how to think critically and how to use creativity to find solutions. So now the object is not to teach the student writing skills, for example, as they already have these, but to understand the skills they possess and refine them in a manner compatible with the code of the L2, in the specific context, be it academia, business, medical etc.

2 The Transformation of Tertiary Education

Robinson (2010), in one of his more creative TED talks, reflected on the existing educational systems and criticised them for killing creativity in young learners. He described systems set up during the industrial revolution which aimed at producing, in batches, educated masses, which are obviously not what our knowledge-based societies need, and called for a strategic re-evaluation of their objectives. A parallel story could be told of tertiary institutions: Although the issues might not be the same, our modern universities, set up at the end of the nineteenth century, are in need of strategic changes as well. They were set up to serve a small percentage of the population. However, demand for education is rapidly increasing. In the UK, one of the leading countries in tertiary education, in 1991 the percentage of 25–64 year olds with a higher education qualification was 16% (Bach et al. 2007); by 2012 this figure had jumped to 38% (OECD 2014).

Today's economies need fast-thinking, creative individuals, workers with good communication and social skills, teamwork and ability to learn independently and adapt to change as well as knowledge navigation (Bates and Sangrà 2011). The challenge is then to turn around our educational institutions to answer the new needs of our knowledge-based societies. Anyone working with or at an administrative level will laugh at the notion of turning education around, and yet the reality is that since 2008 at the tertiary education level we have seen a radical change that might go a long way to answer Robinson's call: Massive open online courses (MOOCs) are the beginning of that change, still providing education for the masses but with the potential to make it individualised—one of Robinsons' criticisms of the actual system. They allow students from any age, cultural context and socioeconomic level, speaking any language (in addition to the one used in the MOOC) to study together—not separated by age, gender or previous qualifications. Learners are in charge of their studies, taking responsibility and learning independently. Many of the most prestigious universities are already offering these courses, with new additions occurring on a continuous basis. Is this the answer the tertiary educational system was looking for in its search/goal to educate all in an affordable manner? It probably is, and if done correctly it will prove to be as efficient and effective as current systems, at least for some subjects. The question is: Can it work in ESP instruction?

3 A Short Introduction to MOOCs

The first course termed MOOC was offered in Canada in 2008, but that is not to say that online courses were not being offered before then, although MOOCs have a bigger audience than traditional online courses. Already they are being split into xMOOCs, which have been developed mostly by prestigious institutions and offered to tens of thousands of students for free, with the aim of imparting knowledge (their

profitability is as yet unclear) and no degree awarded on completion, and cMOOCS, which have been developed by collaborations between public and private institutions targeting a smaller number of students and usually looking to educate. Daniel describes the difference as follows: 'Put another way, cMOOCs focus on knowledge creation and generation whereas xMOOCs focus on knowledge duplication' (Daniel 2012, p. 7). The objectives of the cMOOCs are closer to the ones we should be pursuing within SL and ESP teaching, but the question is still whether ESP can be taught through MOOCs.

3.1 MOOCs and ESP Instruction

Certain elements of ESP can be easily delivered through information and communications technology (ICT), be it MOOCs or other online based programmes, and these elements tend to be the materials that teachers virtualise and upload. But the pedagogic methodologies behind these materials remain the same as the ones used in the classroom: transmission of content that is then evaluated through fill-in-the-blank questions or matching exercises. At best, students are required to review their peers, but this is seldom done with a clear and successful objective in mind. So the online learning process is still based on the acquisition of facts, rules, vocabulary etc. rather than on creativity and critical thinking (Bates 2012). Instead we should be using technology to educate in a new way (Bach et al. 2007).

Developing creativity and critical thinking are skills that require treating learners as individuals, knowing them and being able to direct them at the right pace and in the right direction. We would argue that this might not be possible in a fully online setting such as in a MOOC.

3.2 An Option for ESP Online Instruction: Blended Learning

There does seem to be an alternative: blended (also termed hybrid) learning. This combines online groups smaller than MOOCs with face-to-face teaching, allowing real time with the learner. Many educators believe that because their class material is available in electronic versions, including videos of lectures, texts, exercises to reinforce what has been learnt and access to additional materials, their course has become a blended course. The material may be online, in the sense that it can be accessed through the Internet, but in order to make the blended course effective it is not enough to merely virtualise the existing material (e.g., make it into a pdf and upload it): It is necessary to rethink everything. A report by the Sloan Consortium (2007) on blended learning presented the results from a U.S. survey of over 1000 tertiary institutions and 2033 U.S. adults interested in pursuing secondary education in the short term. It made a very clear distinction between online, blended, and Web-facilitated courses. The latter are 'courses which use web-based technology to

facilitate what is essentially a face-to-face course which uses a course management system (CMS) or web pages to post the syllabus and assignments' (p. 5) with an estimated online content of less than 30%. A blended course is described as a 'course that blends online and face-to-face delivery. A substantial proportion of the content is delivered online, typically uses online discussions, and typically has some face-to-face meetings' (p. 5). The online portion of the content is 30–79%. Online courses are described as those with more than 80% of the content available online and with 'no face-to-face meetings' (p. 5).

The report found that blended courses are not being offered as a step towards fully online courses (p. 3), and that there had been a small decrease in the number of this type of course between 2003 and 2005 (p. 2). These results might reflect two things: that online and blended courses do not answer the same needs and that blended courses may be much harder to create and manage. Indeed, Bates and Sangrà (2011) also make this distinction and state that the programme should dictate how technology is to be used and what the delivery method should be; the course teams should be able to decide on the role of technology but the individual teacher, as well as the students, ought to have the freedom to decide how to use those tools (p. 217). Successful blended programmes are those that fall under the overall strategic umbrella of an institution and provide good quality and an enriching learning experience that also results in teacher satisfaction—which includes a manageable workload (Stacey and Gerbic 2008).

Blended learning seems to answer both the need for an online presence and to maintain the role of the educator. There are a number of forms of blended learning; in some instances, it is being taken a step further in an attempt to bring down the old system's constraints related to space and time (Clayton Christensen Institute, n.d.; Freeland 2014). The reality of most academics is that they are required to carry out research as well as instruct. Full availability during the day and at weekends is not feasible, which means that programs have to be able to incorporate time constraints at least in the face-to-face elements, which tend to take place inside the institution.

One of the blended learning models that is becoming quite popular is *flipping* the classroom. Flipping is a method of instruction that places more responsibility on the learners by asking them to prepare the face-to-face lessons beforehand. This ensures that the learners come to class ready to discuss the topic because they have had access to the materials online as well as time to think and even discuss it with peers before the face-to-face session. This results in classroom time that can be spent dealing with questions and queries and not solely lecturing. This model fits in well with the objective of creating independent learners, because students must become proactive and take responsibility for their own studying. Such a learning model helps teachers with their workload by having activities designed so that they direct the learners to find materials themselves and evaluate and discuss them. This is one of the goals Bates and Sangrà (2011) see as part of a future ideal teaching and learning scenario (p. 219), albeit one that we could be implementing now.

Blended learning has the additional benefit of allowing educators a variety of approaches: There is room for both objectivist and constructivist approaches (Bates and Sangrà 2011, pp. 44–45), where control is also being flipped between teacher

and student. In some cases, a formal approach is necessary to transmit a series of facts, maybe because of time or institutional constraints, such as evaluations, and both modalities can allow for this. On the other hand, a constructivist approach allows the teacher to give most of the learning time to the learners to control. The caveat is that many students do not know how to organise and control their time.

4   The Role of the ESP Educator in an ICT Environment

Given the above, the first step is to determine whether online content is necessary at all. In many cases, online content is not so much a programme but an institutional requirement. Pressure has been mounting for institutions to be recognised as providers of education online to the extent that sometimes the content offered in these programmes is compromised. Most tertiary institutions have invested in e-learning platforms (such as Moodle, Blackboard, ecollege, WebCT), yet sometimes staff do not want or know how to use them. Worse still, students may not like them either, resenting the time spent trying to navigate the system and very often having to jump between systems depending on the course. But the reality is that we are changing: We have already changed as a society and the Internet is here to stay. The ICT resources the Internet provides are beyond anything we could have imagined 50 years ago, and it would be irresponsible not to take advantage of them. ESP learners use these resources constantly, and everything is now available online: industry-specific reports and information, audio and video files, case studies, chatting partners, talking partners, answers to questions and even voice translations.

If everything is available online, we have to ask again about the role of the educator. If the role of the teacher is to provide content in a pre-established order and then evaluate students' acquisition of this content, there is no reason why the course should not be converted into a MOOC, as both those functions can be done faster (and probably better) through an online course. If the role is to guide the student through a textbook, then the textbook can be made available online and a clever algorithm developed to let students advance according to their performance. However, the role of the educator is surely a more complex one, as despite the availability of textbooks and online materials, teachers are still in demand. All educational traditions are based on a teacher, a guru, who shows the way: Even in a knowledge-based educational system these figures are still needed. What is the teacher bringing to the classroom that an online course does not have? I would like to propose two things in particular: One is the facilitator role that guides the learner on how to think critically and creatively, and the other, often derided, is to entertain, that is, to provide a social stimulus.

The notion of entertaining might be closely linked with that of immediacy, a termed coined by Mehrabian (1972) referring to the 'perceived degree of physical or psychological distance between two (or more) people' (Lopez-Ozieblo 2013,

p. 325), which can be developed through verbal and non-verbal communication such as proximity, gaze, facial expressions and gestures (hand movements). This might explain why online learners prefer videos in which the teacher (or speaker) is visible (Stacey and Gerbic 2008). Moreover, the use of gestures has been shown to be much more than a device complementary to speech or a turn-management device (Duncan 1972). Gestures are also used to free cognitive resources (Goldin-Meadow 2005), organise spatial information (Kita 2000) and clarify problems of co-reference (Gullberg 2006).

Online environments seldom give the learner or the teacher the possibility of using gestures to create immediacy. Online material can be made entertaining, and the material can be creative in itself; this will not be discussed here as it ought to be the competence of instructional designers to create visually appealing content to answer the needs of the educator. The real challenge is to ensure that the material leads to critical thinking and the correct social response. Also, because each learner is different it might be that this is an aspect of teaching that really requires face-to-face time. We would argue that virtual time, even one-on-one, is not the same as face-to-face time because, as Vygotsky (1978) proposed, humans learn with all the senses from what is around them and through interaction with others.

5   Pedagogical Approaches

5.1   Social Learning

Vygotskian principles state that children learn by progressing from dependency on others to independence by obtaining control of tools, symbols and sign systems such as language (Lantolf and Appel 1994). Halliday (1975) explains that the child interacts semiotically with others thanks to a shared attention to objects. If we imagine the SL learner progressing in a fashion similar to the child in the acquisition of the L2, we soon realise the importance of the environment and the need to have access to others and to shared-material in order to learn, making meaning through the communicative act. Vygotsky (1978) claimed that cognitive development is inter-psychological, is the result of specific social interaction and is 'learned first through social speech and then is internalised' (Washburn 1994, p. 71). With these principles in mind, it seems that developing the skills knowledge-based societies demand (critical and creative thinking) requires a high level of social interaction. Effective learners of L2 naturally seek social interaction, taking every available opportunity to have contact with the L2 and context where the L2 is used.

5.2   Form Versus Content in Lower Proficiency Levels

Teachers need to decide what material to cover in the face-to-face context and what to put online, bearing in mind this will be the material the student will be responsible for and will be able to control. Williams's (1999) study on learners of academic English in four levels of proficiency based on the Secondary Level English Proficiency (SLEP) test (seeking to gain access to American tertiary institutions) found that learners are more attentive to lexical rather than grammatical issues, although this changed as the proficiency level. Another finding of the same study was that the number of learners' questions or comments to the teacher relating to aspects of the language, such as meaning, spelling, pronunciation and grammar, decreased to a third from the first to the fourth proficiency level, while questions to fellow learners increased in the same proportion. Also, more advanced learners were seen as more willing to give feedback to fellow students (p. 83). Personal observations agree with this, observing a significant increase of peer-to-peer help halfway through the Common European Framework of Reference for Languages (CEFR) Level A2 (Council of Europe 2001). Therefore, it would make sense to provide more individual lexical material at lower levels and introduce discussions and peer assessments in higher levels. This reduces students' responsibility to attend to form in the earlier levels and allows them to do what is most natural to them in attending to the lexical elements. It is unclear whether explicit focus on form increases learners' attention to it, but it seems to be related to the learner's understanding of the activity's objectives (p. 93). The suggestion is to ensure that students are aware of the goal of the activity and introduce form when the students begin to formulate questions about it (or just before, as an experienced teacher should be able to do), at the same time increasing exercises of a social nature online.

The above findings are supported by a study carried out by Van Patten and Cadierno (1993) in which they confirmed Krashen's theory of a dual competence system in the learner: acquired versus learned. Their study on how explicit grammatical instruction leads to processing input concludes that explicit grammar teaching and practice leads to learning rather than acquisition and that a focus on learners' perceptions and input processing might be more beneficial to the acquisition process than practice via output. (Their study did not compare the explicit versus implicit mode of instruction; it examined only the explicit mode). Online form content should not focus on repetition but on leading the learner to understand what they might be able to take out from each specific type of input. In a face-to-face situation this might be easier to achieve: the teacher is asked a question and then leads the student to relevant input until the student discovers the answer. Online, the learners need to carry out the process themselves, be able to find relevant input and compare it. Because this is possible but not all students have the initiative to do it, this is where the teacher can provide guidance through posing initial questions and directing the learners to relevant input.

5.3 Contrastive Approach

In the ten principles that serve as the 'basis for language teacher education' identified by Ellis (2005, p. 292), the first was to ensure that instruction results in knowledge of formulaic expressions and learners' rule-based competence. As previously discussed, learners begin by internalising set expressions and generally by focusing on the acquisition of vocabulary. Online, the content of the first level should focus on this to start with, but without precluding the addition of other instructional objectives. In adult ESP acquisition we can use a contrastive analysis approach (comparing the L2 with the L1 of the learner) to get learners to understand the problems they might have in the L2. In a multicultural group, this exercise, which could be initiated face-to-face but easily moved to an online discussion, can involve all students and its 'factoid' element entertains.

The contrastive approach, although criticised for not always predicting learners' errors, or predicting errors that never take place, is regaining popularity in research studies looking at cross-cultural comparisons and at positive transfers (Saville-Troike 2012, pp. 39–40). It is a successful method to make students aware of differences between two languages and lead them into discovering what environmental factors might have shaped these differences (or similarities).

5.4 Pragmatic Factors

Ellis' (2005) second principle indicates that learners should be aware of both semantic meaning and pragmatic meaning (p. 293). Kasper and Rose (2002) have pointed out that L2 students might have difficulties attending to both propositional and pragmatic content at the same time (p. 351). Traditionally, most beginners' content will focus on the semantic meaning, but online resources give a wide choice of examples to illustrate the pragmatic meaning, giving the possibility of emphasizing both. In a teacher-centred environment, the teacher has been responsible for finding these examples and making them available to the learner, but online, as the responsibility shifts towards the students, it should be the learners in charge of finding these examples, pointing out the different meanings by context, sharing and discussing them. Although the teacher is still overseeing the process (and reading the posts) there is less need to intervene. A well-presented case can then be further analysed in class or made memorable by showing a pragmatic misuse. Insisting on the benefits of explicit instruction, Kasper and Rose advise that 'learners receiving instruction in pragmatics outperformed those who did not' (Kasper and Rose 2002, p. 353).

5.5 *Learning Styles*

One other point to consider is that pedagogically, teachers are encouraged to be aware of different learning approaches preferred by students and to provide a variety of materials to suit all approaches. Online research on learning preferences of 20,254 participants indicated that over 50% prefer to use more than just one learning modality (read/write, visual, kinaesthetic or aural) (VARK 2014), suggesting that a combination of at least two modalities is advisable. Bach et al. (2007) suggest that it is not that students are one type or other of learner, but that their approaches are dependent on the context they find themselves in (p. 47). The educator should ensure that the content matches the likely learning style and strategies to be used, and that students are familiar with and able to use them all.

6 Discussion

We have commented on the importance of social interaction in the face-to-face context; it is also a crucial element of the online context (in blended learning) but the challenge is, as Taillefer (2015) expounds, how to include it in curriculum design.

ICT provides so many options for addressing the above pedagogical requirements that choosing the right one can become a daunting task. We will not cover learning management system (LMS) use in this chapter, which usually also includes social interaction tools, as this volume already describes its use (Chap. 3). Instead, the rest of this chapter will focus on how to include social activities in the ESP course.

6.1 *ICT and Newer Generations*

Much has been said about the learning preferences of newer generations; they are digitally literate, highly social, prefer immediacy (multitasking and fast results) and learning in groups (Oblinger and Oblinger 2005), but the reality is that digital competence will vary (although it certainly seems true that 24-h social connectivity is a must), meaning that we cannot assume that students are familiar with all ICT tools we present them with. This is an issue seldom mentioned in the literature: The belief tends to be that the student is more technologically literate than the teacher, yet this can be an impediment to implementing online programmes. When the learner finds technological difficulties, the instinct is to blame the teacher and give up on the task. Thus, if the programme is delivered online, the point of contact with the student, which in a blended context is usually the teacher, has to first ensure learners' IT literacy and willingness to use it. Among the older generations—those who were not born texting but have a Twitter account—an important issue to consider is

willingness to add to their already long list of software tools. This means that to communicate with students it may be easier to use Facebook than the notifications element of an LMS or to talk it may be easier to use Skype rather than a proprietary video-conference system specific to the institution. Another point to bear in mind is that the transferability of Internet skills 'such as searching for reliable sources of information' (Bates and Sangrà 2011) is not always successful from a social to an academic content nor is knowing what to do with them once found.

6.2   Social Tools

Even if younger generations are very social and prefer to work in groups, the reality is that in a learning context they might need to be pushed into working together, especially if learners do not know each other. The setting and management of the working groups can either be set by the teacher or by the students themselves; both scenarios have their advantages and disadvantages. If the activities are evaluated and the evaluation system is based on a bell curve (where only a certain percentage of students can get an A), a mandated group composition can result in unnecessary stress to the students. On the other hand, the reality of the workplace is that most managers assign teams and the blame or the rewards are shared by all in the team regardless of their effort. Learners who have never experienced this situation ought to try it in the safe setting of education. A combination of both teacher-assigned and student-chosen groups might be best—with the former being used at the beginning of the course when students do not know each other. If the group work is to take place online, it is highly recommended that the group be set up during face-to-face time and allowed to work together, for example, to discuss their understanding and perceived goals of the task, before becoming virtual. In many cases they will choose to meet again, outside assigned class hours, which is a positive step towards developing the peer network necessary in industry contexts. This will make them comfortable enough with each other to enter into discussions and correct each other.

Collaboration online can take many forms, from simple emails (probably the least preferred choice among students but still used in industry) to messaging apps (such as WhatsApp; almost a must-have today). Most LMSs provide a range of tools, blogs, discussion boards and wikis that mirror what is available as open source software. Many learners are not familiar with either LMSs or open source alternatives (in a recent class count performed by the author in September 2013, only 2 of 30 undergraduate students had ever set up a blog). The institutional software is safe, information is confidential and access restricted, but it might not be available to the student upon graduation; therefore, making its use in the ESP class less attractive. On the other hand, open source ICT comes with issues of confidentiality. As younger students are often not too concerned about confidentiality, the teacher might need to explicitly point out this downfall and highlight its unlikely use in a client-based context. Vlogs (video blogs) or blogs are good substitutes for paper

portfolios, allowing individual learners to keep a diary and include podcasts (audio), vodcasts (video) or photos. The use of these should be encouraged among students of media communications as they are quickly becoming the tool of their trade. Wikis or their equivalents, such as Google Forms, are much more suitable to group work, as content can be accessed and edited by any of the group members. Wikis work well when users understand the need for all to contribute and some basic rules are agreed at the outset (such as how to delete or edit another's entry). Discussions might be trickier to set up and maintain, which is the same as in the face-to-face environment, especially in the lower proficiency levels. Often, the online contribution to a discussion is just a repetition or an irrelevant comment to what has been said before. Learners who are evaluated by the number of contributions might feel pressure to write something, although any production in the SL is better than nothing, but that could be one of the blog's functions. The educator should set up and manage the discussion so that the objective remains to develop the thinking process; through reflecting on the input, be it linguistic or cultural input, or exchanging sources of input that illustrate what has been learned.

6.3 Tool Selection

When selecting any of the tools mentioned above, teachers have to be aware that they become the administrators; the first points of contact if there is a problem with the software; and the expected readers of the blog, wiki or discussion. Thus the additional workload has to be carefully considered beforehand. If the writers suspect that their efforts are not being read, they are likely to stop. One motivating strategy is to use the content from these anonymously in class, not necessarily to correct it, but to build upon material that has been posted. Mention of the online contributions legitimises them and authors will feel proud to have been selected and their contributions will increase; at the same time, others will be motivated to do better (Stacey and Gerbic 2008). Depending on the cultural context and maturity of the learners, maintaining the anonymity of the authors may be key to the success of these activities. Thanks to avatars, there is no reason why this should be an issue. Learners' independence might also be an initial stumbling block, as younger adults educated in a traditional system might have little experience of learning autonomously; this can be surmounted with training. Nevertheless, in a blended setting none of these tools might be effective if the group of students lacks a sense of identity and cohesion. The educator may want to spend time during face-to-face sessions to create this identity first, even to the point of taking time from syllabus-related activities.

When choosing the platform to use for discussions such as the ones mentioned above, a key consideration is immediacy (speed). If the objective is to get learners, possibly many individuals at the same time (even if they are receiving similar information), thinking and responding fast, then a tool such as WhatsApp might be necessary. Most discussion tools provided by LMS are akin to a monologue, where

students write their piece and upload it without reading more than the preceding comment. Contributions can be long, rambling and out of sequence. With a chatting tool answers are fast and short and directly comment on what is being uploaded as one writes. The drawback is that all students need to be available at the same time.

6.4   Support for the Educator

For the teacher, apart from being aware of the additional workload these tools bring, there is also a need for constant support, both pedagogical and technological, to be kept updated and be able to deal with students' queries. This is likely to take additional time (unless the teacher's research field is ICT), and is not to be taken lightly. Learning to use an LMS and investigating open source tools requires time, motivation and patience. Teachers developing courses alone, as is most often the case (Bates and Sangrà 2011, p. 138), have the benefit of autonomy but increase their workload and might compromise the quality of the content they provide. One option is to work together with instructional designers. Designers are able to make virtually attractive material that ties in to the content being covered in a pedagogically correct manner that has been agreed upon by the teacher and the designer. Realistically, this option might not be financially viable and makes the teacher dependent on a second person who might not always be available. A better option, especially when colleagues share the same LMS, is the sharing of individually developed materials. Each teacher is free to use the material available in the database or not. The drawback is that, without an instructional designer, the quality and uniformity of the materials cannot be guaranteed. The alternative is to have a project manager able to do quality, time, and cost control. In any case, the option is again to either use an LMS, open source software or both by providing links from one to the other (Bates and Sangrà 2011, pp. 138–142).

6.5   Pragmatic Learning

One of the potential pitfalls of online courses that are based solely on ICT is the loss of the social interaction and thus much of the pragmatic meaning we convey in utterances. Discussion forums and other social tools, when well managed, can partly cover the basics of social interaction. Although academic, the context in which the interaction occurs may not be the target context of the ESP course. The result is an interaction, in a more informal register, which might not be suitable in a legal or business context. It is possible to role play, but it is difficult to forget that it is just role playing. During role plays, students might feel they are being asked to do something that is not them, as one of Holmes' (2016) students mentioned when pretending to talk to her boss in an elevator. Only when confronted with the real situation will the social skill be valued.

I would like to argue that there is something else that a purely online medium cannot provide. Real situations are valuable not only to make students realise the importance of pragmatic skills, they also help the learning and consolidation process. The scientific explanation for this might be related to the function of mirror neurons. Mirror neurons may help primates to learn by imitation (Rizzolatti and Craighero 2004). Mirror neurons were first discovered in monkeys and presumed to exist in humans and are neurons that are activated when observing an action: The activation 'mirrors' that of the neurons in the individual actually performing the action. In the case of apes, mirror neurons 'fire not only when the monkey executes a specific range of grasps but also when the monkey observes a human or other monkey execute a more-or-less similar grasp' (Arbib 2012, p. 27).

In a social setting such as the classroom, this presumably means that, when performing an activity, neurological activation overall is greater than if the activity were performed in isolation, because watching others will also activate neurons. I suggest that this activation is felt, and both teacher and learners react to it. Actions that are relatively subtle, such as those related to vocalization, are perceived at a neurological level. As activation of certain circuits increases, this enhances the strength of the connections within that circuit, leading eventually to acquisition. If mirror neuron activation might also be helping strengthen the links between neurons, it is likely that social interaction is indeed as important in learning as Vygotsky believed.

We learn with our whole bodies. Children learn meaning 'because the linguistic features in some sense relate to features of the environment (which is made up of human interaction)' (Halliday 1975, p. 140). These are picked up by all the senses and by different parts of the body and then transformed into linguistic metaphors, as suggested by Lakoff (2013). How can we understand what a sweet person is like if we have not got taste buds? Halliday goes on to explain how learning the L1 is possible because the coding used by it corresponds to the code used to understand the environment. We argue that the process leading to SL acquisition is similar. This embodiment of the L2 environment, its perception and understanding, is a key factor in determining the success of the learner, with the educator often being the only interpreting source of the new experience.

Learning the specific language of any of the ESP contexts might initially seem easier if the experiences are similar in the L1 and the L2. However, if they appear similar but have different pragmatic meanings, then the independent learner is likely to misunderstand the situation. As learners believe they understand the situation, they are unlikely to question it. This is when face-to-face contact will ensure the misunderstanding is identified.

7 Conclusions

Understanding learning differences, teaching preferences and pedagogical methodologies is essential to providing effective content and support online. I have made the case for blended learning in a context of tertiary ESP education, where students are likely to be independent learners but still in need of a guiding hand to develop critical thinking skills. Nevertheless, teaching capabilities do not mean competence in online course creation. Online course creation is time consuming and challenging. Thus, the preference should be to work with others, including instructional designers, to ensure the attractiveness of the design.

As the role of the learner increases and learners become more independent, it might be necessary to project back to the teachers and their pedagogical and technological needs to answer the requirements of online tertiary institution strategies. This may help us to understand how they feel in relation to the tools they are required to use (if any) and their competency in using them to design material that is pedagogically sound and attractive. In addition to a wide range of ICT tools the teacher needs to choose from, there is an additional resource that should not be forgotten: other students with similar motivations and goals. Social tools allow the teacher to use social interaction, which is essential to the learning process, both in and out of the classroom.

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Part II
English for Academic Purposes

The second part of this book, consisting of four chapters, is completely devoted to EAP. Mercedes Díez-Prados and Ana Belén Cabrejas-Peñuelas start by examining how the Internet can be used to ease the process of writing by suggesting resources for the planning, writing and revising stages and how they can be used to carry out a writing task. One of these types of resources is the Blackboard platform, which serves as a discussion tool and facilitates teacher-to-student and student-to-student feedback. Based on sound second language writing theories and ICTs, a pedagogical proposal for a writing task is explained that can be of help to students and teachers alike: to students, in their task of writing an effective essay, and to teachers, in their role as lesson designers, information providers and classroom managers.

Next, the chapter by Antonio Jurado-Navas aims to present a group of undergraduates' attitudes and real experiences with online management platforms in the classroom. The students involved in the experiment are enrolled in a university subject involving ESP. The use of online management systems by university instructors has been limited to the uploading of documents for students to consult; as a consequence, an alternative and more updated classification of tools and uses is described, combining online and offline employment of such platforms. Under a socioconstructivist theoretical framework, online interaction among the different agents in the classroom is analysed. Further implications in group dynamics are also offered.

The key aspect of teaching English to education students is to improve their communication skills, as some of those students will become English teachers. Given that most students report that their listening skills are poor and listening activities make them anxious, it is necessary to improve their attitude to such activities. In fact, the contribution by Ana María Ramos-García highlights the importance of enhancing students' listening skills and reducing their fear of listening activities. She considers that increasing the exposure of students to real input in an anxiety-free environment can gradually improve their listening skills. Therefore, she proposes a parallel ICT-based listening skills programme in which students are given instructions to follow. Self-confidence reduces students' fear and anxiety, leading to better results.

That e-learning has become an essential element in education today is also proved in a tactile experience with simulated 3D learning environments in an English department at a Hong Kong university. With the belief that multimedia instruction and learning can help learners' construction of knowledge, Lan Li researched how Second Life was used to supplement English subjects. Second Life could be used for sharing knowledge, demonstrating language functions, initiating instant communication and enabling peer assessment in the learning process. Various student activities were carefully designed. She determined that the 3D multimedia environment is more effective than a traditional classroom. The data reveals that more than half of the students find virtual learning activities in Second Life stimulating, interesting, interactive and entertaining. On the whole, she regards Second Life as having promise for facilitating students' linguistic development and cultural awareness.

The Internet as a Pedagogical Tool in the Writing Process: A Research-Based Approach

Mercedes Díez-Prados and Ana Belén Cabrejas-Peñuelas

Abstract This article examines how the Internet can be used to ease the process of writing by suggesting resources for the planning, writing and revising stages and how they can be used to carry out a writing task. One such resource is the Blackboard platform, which serves as a discussion tool and for teacher-to-student and student-to-student feedback. Based on sound L2 writing theories and ICTs, a pedagogical proposal for a writing task is proposed and explained that involves invention and organizing techniques; peer and teacher evaluation using the Blackboard platform; activities to practice argumentative skills, the five-paragraph essay and paragraph structure and evaluation sheets with criteria for correction on the Blackboard platform. This writing task can be of help to students and teachers alike: to students, in the task of writing an effective essay, and to teachers, in their role as lesson designers, information providers and classroom managers.

1 Introduction

L2 writing pedagogy has been characterized by a succession of different approaches—often influenced by theories of English composition for native speakers—which achieve dominance and fade but never really disappear. These include the *product approach* (Proett and Gill 1986), with a focus on form and the use of

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'models' for writing. Next, the *process approach* (Raimes 1983; Zamel 1987), with a focus on the writer and the discovery of meaning by following cycles of writing and re-writing. Finally, and most recently, the *genre approach* included in English for academic purposes (EAP) (Hyland 2003), with a focus on the reader and the production of text for a real audience and within a social context. Grabe and Kaplan's (1996) model of L2 writing attempted to integrate all elements by distinguishing the writer's cognitive processing, the linguistic and textual resources for a writing task and the contextual factors that naturally shape writing.

In the meantime, a wealth of literature (Guzdial and Turns 2000; Harris and Wambeam 1996; Liao 2015; Mak and Coniam 2008; Stapleton and Radia 2010) has not been insensitive to the developments of technology and their potential impact on L2 writing. Indeed, the influence of technology on student writing has been long studied from the moment the early word processors started to be widely used until the current Internet-based synchronous platforms; therefore, we have entered the realm of the 'tech-assisted era of L2 writing' (Stapleton and Radia 2010, p. 180). This study argues that, while discussions about approach theories and technologies used as writing tools have dominated the L2 writing field, little work has been done on specifying how Internet-based technologies can help writers in every step of the writing process.

In this paper, we shall be concerned with how L2 writers can take advantage of Internet-based writing tools to plan, transcribe and revise their texts. Thus, Sect. 2 presents a concise theoretical background dealing with second language writing theories and Internet technologies that can aid writing, and the results obtained in previous empirical studies. Sect. 3 focuses on a pedagogical proposal to write essays and shares insights derived from experience using an electronic blackboard at a Spanish University. Finally, Sect. 4 compiles the main conclusions.

2   Theoretical Background

Many studies (Ahmed and Nasser 2015; Hewett 2006; Liao 2015; Saadat et al. 2016; Shewmake and Lambert 2000; Yuan 2003) have recorded positive findings for the use of technologies as pedagogical tools in writing classes. Indeed, both word-processing software and online resources provide tools to improve prose at the formal and content levels. For the writing process, Internet technologies have also proved to be beneficial in enhancing L2 writing.

Before delving into the different writing stages, it is necessary to offer an account of the most important L2 writing theories that serve as a theoretical basis for using the process approach in L2 composition. From the start, L2 writing has closely followed the developments of L1 research, even when research has proved that L2 writing is strategically, rhetorically and linguistically different from L1 writing (Silva 1993). The best known L1 and L2 models (Bereiter and Scardamalia 1987; de Beaugrande 1984; Flower and Hayes 1980, 1981; Hayes 1996; Kellogg 1996; Zimmermann 2000; Wang and Wen 2002) have distinguished three macro-processes—planning, formulation, and revision—that are responsible for text con-

struction. Of these, Flower and Hayes's (1980, 1981) and Bereiter and Scardamalia's (1987) L1 writing models have had considerable influence on L2 writing instruction. The former focuses on what writers do when they compose and the 'problem-solving activity' happening while composing. The latter serves to distinguish differences in writing ability between skilled and unskilled writers, mostly due to their use of two different models: the knowledge-telling and the problem-solving transformation models. The knowledge-telling model, typical of inexpert writers, involves processes of retrieving information from memory, while the knowledge-transformation model, typical of more experienced writers, involves more reflective problem-solving analysis and goal setting. Although not comprehensive and having obvious shortcomings (Gass and Mackey 2012: 356), the few existent L2 writing models—Zimmermann (2000) and Wang and Wen (2002)—attempt to explain whether the L1 or the L2 is used at the various stages of the writing process.

2.1 *Planning*

At the planning stage, computer networks and synchronous platforms provide an effective prewriting space to generate ideas, since students have an immediate sense of audience and of 'group community' (Mak and Coniam 2008, p. 447) and often receive feedback from their peers and instructor. Certainly, online conversations resemble the exchanges typical of oral communication between participants and 'involve high levels of engaged interaction with dialogue and responsivity among participants' (Hewett 2006, p. 6). Harris and Wambeam (1996), who worked with an experimental and a control group, further point out that 'by being forced to defend their own views in the presence of opposing views, students learn to clarify their own viewpoints and also to expand upon them' (1996, p. 367). This explains why their experimental group, who participated in an online journal, obtained statistically better results than the control group for the statement 'Writing journal entries helped me generate ideas'. One of the students recognized the role of the audience for the online journal as a prewriting space: 'This [the journal] was part of the class I like most because I enjoyed being able to share my views with other people, but not have to worry about putting my thoughts into the proper form' (Harris and Wambeam 1996, p. 364).

The Internet further serves as a rich resource for improving the actual content of texts by using Internet search engines, online portals and Web 2.0 applications, such as social networking sites, online encyclopedias, electronic journals and books. Google, which is probably the most well-known search engine, generates results by means of keywords. Google Scholar, Dialnet, Scopus and Scirus are restricted to academic sources. There are other unconventional sites, which are not policed by authorities, but are still widely used. This is the case of collaborative sites, the most famous of which is Wikipedia. By posting to collaborative sites, students participate in Web 2.0 'conversations' or discussions and can even create personalized research spaces where writing and research happen in the same virtual space, as in ARTstor,

and can then be accessed from any computer, therefore fostering collaboration (Purdy 2010).

2.2 Writing or Transcribing

At the writing stage, Internet-based technologies have been found to engage students in collaborative writing, allowing writing to be a socially constructed activity (Kish 2000; Mak and Coniam 2008; Warschauer 2010). The tools (e.g., wikis, whiteboards, online chat rooms and MOOC meetings) provide page-like spaces for interacting and some (e.g., whiteboards) add features for importing texts, graphical markers and tools. In this way, both the instructor and peers encourage topic development by increasing target language production (Hewett 2006), while Web tools promote increased audience awareness (Harris and Wambeam 1996), attention to the content of the communication and its linguistic form (Yuan 2003), evolution of ideas, a greater degree of sophistication of peers' comments and reorganization of content (Mak and Coniam 2008).

Ever since the adoption of the Internet in colleges and universities, students have shown a preference for networked information over print literature, which includes an inclination towards traditional non-scholarly (newspapers and Web sites) and scholarly citations (books and journals; Davis 2003). Also, concerns about the content used in students' texts have started to appear, given the increasing evidence that students lack the ability to use sources with success. Indeed, students have been found to use electronic resources indiscriminantly (i.e., citing any Web source regardless of its authority; Burton and Chadwick 2000; Davis 2003), often not acknowledging the original source or appropriating other voices. No doubt, students should be taught to show due regard to others' ideas and be warned against trusting the information found in a web source without taking the necessary evaluative steps. Often, setting specific guidelines clearly stated and enforced works well. As Davis (2003, p. 49) puts it, the 'solution to the problem. .. was not to ban Web-based citations, but to provide accurate parameters for their use'. However, it is also true that such information, because it is found in unconventional sources, 'can sometimes lead to ideas and ways of viewing problems that are "outside the box"' (Stapleton and Radia 2010, p. 181) and, therefore, it represents a source of new content.

2.3 Revising

At the revision stage, writers can make use of word-processing and online tools to revise at the formal and content levels. When revising for form, spellcheckers alert the writer of inappropriate or non-existent words, green-line grammar checkers spot grammar errors, online concordancers reveal word combinations in written texts and automated writing evaluation (AWE) technology generates feedback on

language usage and idea development immediately. Grammar checkers have been found to be unreliable for L2 writers (Milton and Cheng 2010), giving advice that is narrow and prescriptive (Pennington 1992), while AWE systems do not address global language concerns efficiently (Liao 2015, p. 310). This explains the attempt to create a model that does not explicitly correct lexico-grammatical errors, but learners are instead guided through a discovery process in which they can consult the resources available interactively, take mini-tests and check the collocational properties of words and phrases (e.g., the program Check My Words [http://mws.ust.hk/cmw/index.php]; Milton and Cheng 2010, p. 35–7). For online concordancers, only recently has corpus linguistics offered a new dimension of possibilities to the L2 writer. Indeed, monolingual concordancers from the Web (as well as from carefully designed corpora such as the British National Corpus [BNC]) and parallel concordancers in one language aligned with their translations in a second language have found a place in the second-language classroom through activities that ask students to find L2 words and the contexts in which they are used for a single L1 word (Frankenberg-Garcia 2005). In addition, AWE has been found to bring about positive effects when it is used as part of a social activity; that is, the students' first drafts are reviewed by the software, while later drafts are submitted to the teacher or published online for peers. In such cases, AWE provides a set of tools (e.g., word banks and scoring rubrics) and rapid feedback, which can help writers to write and revise autonomously (Grimes and Warschauer 2010, p. 28). It seems, therefore, that, although far from perfect, spellcheckers, grammar checkers, AWE systems and concordancers have undeniably helped students and have eased the task of instructors, who now have more time to focus on content revisions. Extensive literature (Aston 2001; Attali et al. 2012; Liao 2015; Milton and Cheng 2010) reports benefits from their use, although caution is advised when using corpus tools, since 'both training and motivation to take the extra steps to use them are necessary' (Stapleton and Radia 2010, p. 177).

To address content revisions, instructors of English academic writing bear an enormous burden when having to understand their students' written work and suggest a 'correct' alternative, and it is often the case that they have to point out the same errors many times. The impetus behind many Internet technologies has been precisely to help writing teachers and students to handle writing problems. That is the case of the companion program Mark My Words (http://mws.ust.hk/mmw/index.php), which teachers can use to insert 'resource rich' comments in students' texts and provide links to resources that offer usage explanations, definitions and collocational patterns (Milton and Cheng 2010, p. 39). Other Internet platforms are specifically designed to address revision changes collaboratively. By using the cut and paste options of word-processing programs and Internet-based tools, students working in collaboration move around pieces of text until satisfied with the final solution. In this way, 'through the ease of moveable text, the student should begin to see the various possibilities in his/her ideas, possibilities that might not be explored if they are not easily manipulated on the computer screen' (Kish 2000, p. 154). In wikis and computer-mediated communication platforms, students, peers and writing instructors collaborate on idea development and revision changes. This results in

revisions that can be traced back to both the learners' and instructors' thinking. Hewett (2006, p. 20) expressed it as follows: 'the free give-and-take of ideas enabled the participants to work together toward a solution for the student's writing problem. Such is the essence of teaching, and especially of teaching online'. Close collaboration between instructors, peers and writers leads to the production of different drafts, which are an invaluable tool for both students when working on their final draft and writing teachers, since they provide a picture of the students' developmental stage (Mak and Coniam 2008, p. 441).

Despite the obvious advantages derived from the use of online technologies in L2 writing, there are caveats that writing teachers should bear in mind when deciding to use Internet technologies in the classroom:

1. Computers and Internet tools may not be suitable for all students, such as novice writers with little experience with these technologies. These students need the time for writing rather than for computer tools.
2. Teachers need to offer students some training on how to use Internet technologies and anticipate possible problems. They should not, however, change a writing class into a computer class.
3. Teachers should avoid computer anxiety in students, since the ultimate aim is to aid them in the process of writing and revising, not to have computer literate students.

Once the theoretical background has been presented, we will offer a proposal for a complex writing task; an argumentative essay, which involves high-order thinking skills, following Bloom's taxonomy (i.e., analyze, evaluate and create; Anderson and Krathwohl 2001); and at least a B2 from the Common European Framework of Reference for Languages (CEFR) level in L2 proficiency.

3   Writing an Argumentative Essay: A Pedagogical Proposal

The purpose of this section is to present a pedagogical proposal for an academic writing task. The core of this proposal is to suggest ways in which Internet resources can help in every step of the writing process; furthermore, insights derived from actual teaching practice with some of these resources will be shared. After presenting the task itself, we will mention the Internet resources that can be implemented for each stage of the writing process (planning, writing/transcribing and revising) and comment on the actual results for those that have been used.

In the planning stage, we will mention some resources for generating ideas and preparing for the actual writing phase (e.g., conducting research). As far as the actual writing of the essay is concerned, we will suggest how Internet resources can be used to carry out a task. Finally, for the revising stage, we will mention what type of feedback students can receive by using the Blackboard platform, how they are evaluated and what changes students make from the first to the second draft. The resources mentioned in this pedagogical proposal are aimed at providing both teach-

Table 1 Example of an argumentative essay

Task and topic: Writing a 600-word argumentative essay. Students choose a topic from a list of suggested controversial topics (e.g., 'Should bullfights be a protected cultural heritage or should they be prohibited (or neither)?' 'Does a monarchy make sense in contemporary Spain?')
English level: B2 **CEFR**
Students: First-year university students (majors with a special focus on English).
Aims: To argue effectively for or against (e.g., whether bullfighting should be considered part of a cultural heritage and, as such, respected, fomented and maintained or should be considered a practice that should be condemned and consequently prohibited by law); to conduct research on the topic to document arguments; to become aware of cultural values/beliefs of a collectivity; to articulate critical thinking based on supporting evidence; to show audience awareness and respect for cultural diversity; to value sources accurately; to write a coherent, cohesive and well-structured text, following appropriate academic writing conventions; and to use bibliographic and specialized sources efficiently and correctly.
Internet resources: Web pages for planning, essay and paragraph writing, conducting research, referencing.   Blackboard platform for generating ideas and providing feedback.   Online dictionaries for writing and revising.
Time: The task should be assigned as a final writing task by the end of the course, once students are familiar with the main rhetorical conventions for essay writing and have already completed other writing tasks.

ers and learners with materials that can be found on the Internet to aid in the process of writing effective argumentative essays.

3.1 The Task

The task consists in writing an argumentative essay (see Table 1). This task is based on the one proposed in the last unit of the textbook *Write to Be Read: Reading, Reflection, and Writing* (Smalzer 2005a): 'For this writing assignment, you will write an argumentative essay. In this essay you will present both sides of an issue and take a position on one side or the other' (p. 186).

3.2 Planning Stage

When writing an essay, the planning stage usually includes a period for generating ideas and another period for conducting research and ordering the material (Seely 2005). *Heuristics* is the word for a procedure for learning by discovery or invention (see *heuristics* in the Merriam-Webster dictionary [http://www.merriam-webster.com]).When applied to writing, the term refers to the generation of ideas that occurs in the pre-writing phase and is typically used as an adjective accompanying the

word *techniques* (i.e., 'heuristic techniques'). Axelrod and Cooper (1997), authors of *The St. Martin's Guide to Writing*—one of the best well-known manuals for writing in the English-speaking academic world, particularly in the United States—call these techniques 'invention and inquiry strategies' (p. 429). Leki (1998) calls them 'invention techniques' (pp. 20–33) and mentions the following: free writing (writing contiguously to explore ideas on a subject without worrying about mechanics), listing (writing words or quick phrases to find out what one knows about a topic), asking reporters' wh- questions (asking who, what, when, where, why and how; trying to answer questions about a topic will help decide the type of essay one can write, e.g., cause-effect or analysis; Wilson 1988), creating clusters or branches (associating or categorizing ideas), looping (doing free writing in short consecutive phases; after each phase writers extract the main idea and write for another phase or 'loop' until they determine their theses), cubing (looking at an idea from six points of view: describe it, compare it, analyze it, associate it and argue for and against it) and outlining (structuring your ideas on a subject; this technique can be used after a less-structured technique). The Internet offers countless resources to practice all of the invention techniques. See the following site for cubing as an example: http://www.narragansett.k12.ri.us/Resources/Narragansett%20Ideas.htm.

Smalzer (2005a, p. 80) mentions mind mapping, a clustering technique, as a way to generate ideas: An idea about the topic is written at the center of the page and then branches stem from the central box and more specific ideas are placed in them. Graphic organizers are another tool to organize ideas visually. There are Internet resources that help with these last two invention techniques. For example, the Balanced Reading Website (http://www.balancedreading.com/graphorg.pdf) gathers many graphic organizers for the many different ways ideas can be arranged and organized depending on the demands of the essay: Spider (main ideas vs. details), Fishbone (causes for results), Storyboard (sequencing of events in a story), Venn Diagram (for categorizing different and overlapping items), Problem and Solutions (different ways to solve a problem), Compare/Contrast and a few others. This document comes in a PDF format, so it can be saved and printed for use as a worksheet (each type of organizer is repeated: On the first page, the graphic organizer is explained and on the second one, the graphic organizer is blank for student use).

Mindmapping seems a robust and powerful tool for the organization of ideas. Searching the web, one can find an abundant number of web pages for the mind-mapping culture. Software exists that can be used to create mind maps, such as ScatterBrain (http://www.scatterbrain.nl) or EDraw Mindmap (free of charge at http://edraw-mindmap.softonic.com/), and mind maps are even for use in professional settings (e.g., Mindjet at http://www.mindjet.com) and are the subject of blogs (e.g., http://mindmappingsoftwareblog.com/). For an explanation on what mind maps are and how to use them, one can consult the Toolkit section on Learning Skills/Mindmaps on the Mind Tools Website (http://www.mindtools.com/pages/article/newISS_01.htm). In addition, illustrative visual images of mind maps can be found by doing an Internet search for 'mind maps' and clicking on Images.

In spite of the benefits derived from spending time on idea generation, students are, in general, resistant to planning their writing. As they themselves manifest, they

think it is a waste of time: they find it tedious and prefer to use the computer for writing and editing what they are writing, until they come up with their final product. However, as Seely (2005) points out, 'it is a good idea "to think on paper" to avoid coming to a halt and, what is more important, because "[i]t is difficult to write at any length without some form of preparation"' (p. 78). Thus, we may need to force our students for their own sake to do a certain amount of planning on paper. Some of the suggestions included above can work out well, although they require some training, because students tend to rush through this process, elaborating very simplistic mind maps, incomplete outlines or free writing texts that are not significantly different from their final drafts. Of course, some students make a greater effort, making mind maps that are truly works of art and full of ideas to develop in their essays. However, these are the exceptions (see the Appendix for an example).

Of all invention techniques mentioned above, students can practice free writing, looping, mind mapping and outlining. At the end of the course, all students should hand in a portfolio with all the tasks carried out during the course that should include all pre-writing tasks done. Before writing essays, in order to organize their ideas before engaging in the essay-writing phase, students are encouraged to do two invention techniques: first, a less structured one (i.e., free writing, looping or mind mapping), then a structured one (i.e., outlining). The Appendix includes an example of an outline elaborated by a student in which the essay structure can be clearly seen. The outline follows the guidelines provided to the students by the instructors of the course (see Acknowledgements). This outline sketches the main ideas in each paragraph, as well as the thesis statement. The essay structure follows the five-paragraph essay convention presented below: an introductory paragraph, three body paragraphs and a conclusion. In the introduction, the student needs to mention what her thesis statement is (what idea is going to be defended in the essay) and what introductory technique is going to be used in order to catch the reader's attention. Each body paragraph has the following elements: a major point (i.e., the main idea dealt with in the paragraph), expressed as a topic sentence; the reasons that support the idea; and the pieces of evidence that are going to be used to prove it. The conclusion also mentions the technique the writer plans to use: in this case, summarizing the main ideas in the text. As can be seen, once the student has reflected upon the content of her essay and has designed a complete outline (i.e., she has 'thought on paper'), the arduous task of writing a 600-word essay on a complex topic, such as the one selected by the student, "Does a monarchy make sense in contemporary Spain," is somewhat eased. Of course, the outline is carried out after the student has conducted some research, as can be clearly appreciated in the specific evidence included in the outline.

Smalzer (2005b: viii) proposes writing entries in a private journal as response to introductory reading on the formal writing topic of each unit. He suggests that at this point of the writing process, the writing performance should not be collected or graded for the student to understand the concept of audience. Writing just for the students' own eyes helps them to gain personal insight on the topic and not to be afraid of being judged by the reader, be it classmates or teacher. However, he recommends that some record-keeping system should be devised to make sure students
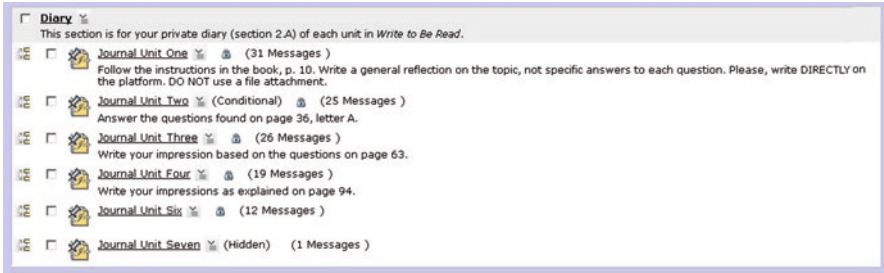
Fig. 1 Discussion tool in Blackboard Learning System CE8 platform

actually complete the task. This is how a teaching platform can be used. The Blackboard platform is a discussion tool that can be used as a journal (see Fig. 1):

This discussion tool allows the teacher to choose whether or not to evaluate the student's entry (if we follow Smalzer's (2005b) advice, we should not) and, if so, what type of evaluation to choose (numeral or nominal). What the tool does not allow is for the teacher to edit (i.e., correct) the student's text. Teachers can determine the audience by selecting whether they want other students to be able to read and respond one another's messages or not. The tool can be used in either an asynchronic way, where students decide when to write their entries within the time constraints imposed by the teacher, if any, or in a synchronic way (e.g., at a computer room), where all students are writing at the same time on the same topic and answering one another's messages. The teacher can also decide whether to allow students to edit their messages or not. Both these options (answering one another's messages and not stopping to edit) favor a focus on content rather than on form and foster real communication between students, in addition to giving writers the opportunity to accommodate their writing to the needs of different types of audiences (students stop writing for the teacher's evaluative eyes and address their peers, who will be mainly interested in the message). The teachers' roles in this synchronic activity can vary: controlling from their desks what students are writing, with or without intervening, or walking around the classroom helping students. Fig. 2 captures how the assessment tool in the discussion tool could be used: Students' participation is not evaluated and, as they are selected, other students are not allowed to assess one another either. If teachers want this, they can choose for students to provide a mark to their classmates or not. Since at this point it is preferred for writers and readers to focus on content, the peer-evaluation option is blocked, but the entrances are made public, so that they can respond one another and build on their classmates' writing.

Another preparatory task that could be done in class before writing an essay is having students read a text and analyze it in order to develop and practice argumentative skills. Some activities that can be carried out with the text are:

- **Arguing as a writing strategy:** The aim of such an activity is for students to recognize when a writer presents a carefully reasoned and well-supported argu-

Fig. 2 Evaluation tool in discussion groups in Blackboard Learning System CE8 platform

ment. Students should know that a good argument takes into account other points of view and presents a position in a thoughtful and convincing way. The task proposed is for students to read a text that is somewhat biased and presents claims not fully supported by evidence. In this way, students become aware of poor reasoning and recognize the importance of using sound evidence in their writing (Bennett 2015; Pullman 2013). The Internet can serve as a source to search for argumentative texts with spurious or groundless arguments (e.g., the text 'The Spaniard: Everything you need to know for dealing with the locals', found at www.justlanded.com[1]). The reading activity could be preceded by a true/false questionnaire in which students express their own opinion or knowledge on the subject dealt with in the text. Students then read the text individually to check whether their answers to the questionnaire coincide with the information in the reading and, in groups, discuss the ideas defended and compare them with their own. They should decide whether the writer presents a carefully reasoned and well-supported argument; to do so, they need to recognize the pieces

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[1] This page offers guidelines for traveling around different countries. To access this article on Spaniards, on the Home page, click on 'Spain', then 'Culture' and then in the first section, called 'Spain Guide—Culture', select the first article, entitled 'The Spaniard: Everything you need to know for dealing with the locals'. As a text dealing with stereotypes for citizens of a given country, this is likely to work well for the activity proposed, since stereotyping is based on generalizations that cannot always be supported by evidence.

of evidence used by the writer, which Pullman (2013) calls 'reading against the grain' (p. 1).

- **Making a claim:** According to Axelrod and Cooper (1997), '[c]entral to any argument is the thesis—the point of view the writer wants readers to adopt. Essays that explicitly argue for a point of view present the thesis in a thesis statement' (p. 526). The purpose of the thesis statement is to announce the writer's main point. The students can re-read the previous text and decide what the writer's thesis is and whether there is a clear thesis statement making a claim. As Axelrod and Cooper (1997) explain, thesis statements, to be effective, must satisfy three standards: 'be arguable, clear and appropriately qualified' (p. 527).

- **Supporting claims with reasons and evidence:** Students go back to the first exercise and decide what kinds of evidence the writer uses: facts, statistics, authorities, anecdotes, scenarios, cases and/or textual evidence (types of support that Axelrod and Cooper [1997, pp. 530–537] mention).

- **Recognizing logical fallacies in arguments:** Students should look for fallacies in the same text. Below are listed the most common fallacies according to Axelrod and Cooper (1997, pp. 542–543), although there are numerous categorizations (e.g., Rigotti 2005; Keith and Lundberg 2008; Pullman 2013); for illustration purposes, we include our own examples for each type:

  - Begging the question (i.e., circular reasoning): 'You must respect speed limits on roads because the law says so. And the law is right'.
  - Confusing chronology with causality (i.e., assuming that a former event caused the latter, just because it preceded it): 'I didn't get up early, and then I failed my test. I need to get up early to pass my test'.
  - Either/or reasoning (i.e., assuming there are only two sides to a question): 'You are either with me or against me'.
  - Equivocating (i.e., misleading or hedging with ambiguous wording): 'The church would like to encourage theism. Theism is a medical condition resulting from the excessive consumption of tea. Therefore, the church ought to distribute tea more freely' (source: www.logicalfallacies.info).
  - Failing to accept the burden of proof (i.e., claiming without a reasoned argument to support it): 'We cannot claim he is guilty; therefore, he is innocent'.
  - False analogy (i.e., assuming that the same conclusions can be drawn from two issues that resemble each other): 'Children are like sponges: They absorb everything'.
  - Overreliance on authority (i.e., believing the authority and ignoring contrary evidence): 'I was following orders' (said to justify incorrect or immoral behavior).
  - Hasty generalization (i.e., supporting a conclusion with weak evidence): 'Last night, an 18-year-old boy ran a red light and ran over a pedestrian. Eighteen-year-old drivers are reckless drivers and shouldn't have a driver's license'.
  - Oversimplification (i.e., answering complicated questions with easy answers): 'If you would like to get rid of terrorism, vote for Mr X'.

– Personal attack (i.e., demeaning the opponent instead of their argument): 'He's a liar; you can't believe anything he says'.
– Red herring (i.e., misdirecting the discussion by raising irrelevant issues): 'Petrol prices have never been so low!'
– Slanting (i.e., emphasizing the evidence that supports your claim and suppressing or playing down other evidence): 'The next election campaign will only cost a certain amount of money' (suggesting the amount of money is not great).
– Slippery road (i.e., pretending that one issue inevitably leads to another): 'You have to stop your child from becoming so rowdy. The next thing you'll see is that he walks all over you'.
– Sob story (i.e., manipulating readers' emotions to mislead them to unjustified conclusions): 'Sorry, officer, I know a made an illegal turn but I had to be at the office on time'.
– Straw man (i.e., basing the argument on a widely recognized weak claim): 'A: Rainy days are good. B: If all days were rainy, we'd drown'.

Even if the planning stage seems long and complex, and both the teacher and the students may get the idea that it is unnecessarily diluting the writing per se, some robust preparatory work will definitely function as scaffolding for the most challenging phase in the writing process: the writing stage.

3.3   The Writing Stage

In this phase, students are instructed to write a five-paragraph essay. Before that, five-paragraph essays are explained to them from a theoretical point of view. This concept is a writing convention that is widespread and accepted in American rhetoric at all levels of schooling (primary, secondary and higher education). As such, there are thousands of web pages dealing with it; even small children are acquainted with this essay structure via the metaphor of a hamburger. If this analogy is used with our university students, they will never forget what a five-paragraph essay is. A PowerPoint slide such as the one below can be used with our students to present 'the hamburger model' (see Fig. 3).

They are asked: 'What do hamburgers and essays have in common?' If the presentation is animated, the information in the slide can be revealed little by little by clicking the left mouse button in order to help students find out inductively how hamburgers can be used as models for the five-paragraph essay. A graphic organizer with the form of a hamburger can be found on the Super Teacher Worksheets Website (http://www.superteacherworksheets.com) by clicking on 'Writing worksheets' and then 'Graphic organizers' (it is the first option). Although these are resources for English-speaking children, they can also work for older EFL students.

For a web page where the five-paragraph essay is explained in a more formal way, check Book Rags (http://www.bookrags.com/articles/4.html). Advice on how to write a thesis statement can be found on the Web page About.com (http://home-
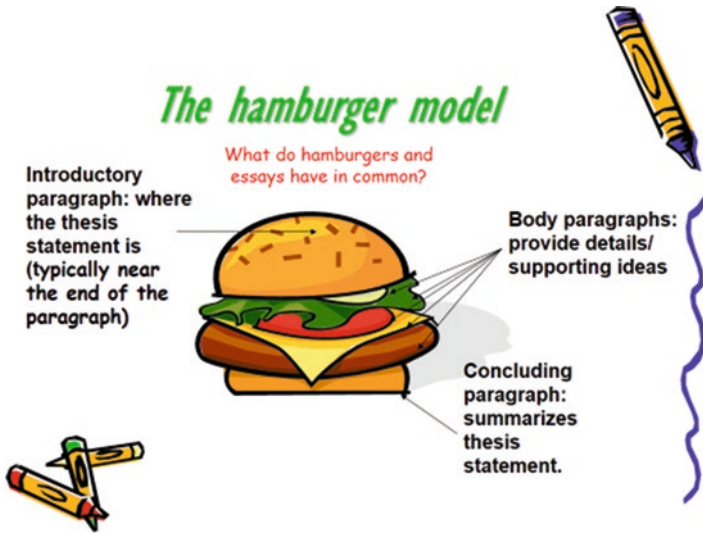
Fig. 3 The hamburger analogy

worktips.about.com/od/thesissentence/a/fuss.htm) and for explanations and exercises on how to organize a paragraph, you can browse the Academic Writing (Ana Cabrejas Peñuelas) Web page http://www.uv.es/anglotic/academic_writing/Paragraphs_and_Discourse_Markers/index.html. There you can find an explanation of what a paragraph is and exercises to identify paragraph features, as well as what discourse markers there are and exercises to practice with them.

A crucial but difficult aspect for our students when writing an essay is documenting and recognizing sources accurately. As mentioned in the theoretical section of this paper, students tend to use electronic sources indiscriminately, using the Internet almost exclusively for documenting their texts with neither clear criteria on what should be trusted nor appropriate acknowledgement of the sources used. Furthermore, our Spanish students are frequently not conscious that they are committing plagiarism, even if warned, because they have been handed down a deep-rooted tradition of 'cut and paste': Copying other people's words has never been *strictly* considered plagiarism when writing papers at school. Teachers may have always advised students to summarize information rather than copying it directly from books, but not even they (us now!) were aware of the fact that both summarizing and copying without acknowledging the source were, indeed, plagiarism. When computers were not available, students copied information from encyclopaedias and other books to write papers; these days, students from the ICT era have it easier to cut and paste without even having to open a book!

Therefore, the first step to take is to make students aware of plagiarism and, more specifically, of cyberplagiarism, since the Internet is, whether we like it or not, their main source of information. According to Stroo (personal communication, August 22, 2013) most U.S. universities, 'in an effort to teach and enforce plagiarism', use

Turnitin®, a program that can detect whether a text has been copied from the Internet. Even students are encouraged to test their papers before turning them in and change passages that are recognized by the program as having been found on the Internet: 'Students can go back and "fix" the parts that are flagged and rewrite the incriminating passages using the skills learned in class (paraphrasing etc.)' (Stroo, personal communication, August 22, 2013). This software is available at http://turnitin.com/en_us/features/overview, although it is not freeware.

Our second task is to warn them that not all sources should be trusted and, what is more difficult, provide them with criteria to decide what to trust and what to disregard. Finally, students should be explicitly taught how to quote, paraphrase or summarize sources appropriately and then introduced to the citing conventions (according to MLA, APA or any other documentation system). Axelrod and Cooper (1997, pp. 595–629) devote a whole chapter to these issues: 'Using and acknowledging sources' (later editions of *The St. Martin's Guide to Writing* may have updated information on this topic, particularly on how to cite Internet and other electronic resources). The newest editions of MLA and APA also include sections on how to cite electronic sources, and web pages from many universities include information on how to cite according to MLA or APA citation systems (our recommendation is the one designed by Purdue University at http://owl.english.purdue.edu/owl/, one of the resources in their Purdue Online Writing Lab [OWL]). Although trained on these issues, it is a matter of fact that our students face great difficulty in mastering both appropriate citing conventions and elaborating accurate reference lists.

Giving clear criteria on what constitutes a trustworthy source does not seem a straightforward matter. Axelrod and Cooper (1997, pp. 591–594) suggest taking into account the scope and approach of the source (i.e., whether it is general or specific enough, adequate in length, what the intended audience is and whether the author is an expert on the topic), the publication date (up-to-date information is desirable but older authoritative sources should also not be forgotten) and viewpoint (i.e., to develop a sound argument, our sources should be representative of a variety of viewpoints so that we can both support our opinion and anticipate counterarguments). Identifying bias in the ideas expressed in texts is crucial to determine writers' viewpoint, which will definitely influence their argumentation. Also, Seely (2005) points out that we need to validate our sources, since 'anyone can set up a Web site and publish absolute nonsense, and many people do' (p. 257), and warns us that there are no clear-cut guidelines. His advice is to search for the Web page owner (institution, government, organization or individual) and judge that owner's credibility (which may be difficult for students).

Although there is no denying the key role of the Internet in conducting research, our students should be reminded of the need to consult print material for its greater reliability as a source. We need to instil in our students the habit of browsing the library to document their scholarly work and not rely exclusively on the Internet.

3.4 The Revising Stage

Revision affects mainly two aspects, corresponding to the formal and the content levels. Regarding form, computers can help detect errors at the lexical (e.g., spelling mistakes and non-existent words) and grammatical levels (e.g., lack of agreement, sentence fragments and verb tenses). On the other hand, content revisions involve higher order accommodations of the text, and students are both more resistant and less able to carry them out. Revising is not only arduous but often tedious and if time-pressure is involved, novice writers tend to disregard deep content revisions or remove problematic pieces of text instead of fixing them (avoidance strategy). However, some students do deeply revise their texts, not only replacing formal errors with their correct form, but also rephrasing ideas, providing further evidence when needed, rebuilding or adding paragraphs and, in general, greatly improving the quality of the final product. This is when the teacher's effort and the hours invested in evaluating the students' work are rewarded! One way to facilitate revision and also encourage the idea of audience is for students to peer-review their texts. While it is true that L2 students often have concerns regarding the ability of their peers to make good quality comments (Tsui and Ng 2000), others see the positive value of getting feedback from peers, including working collaboratively rather than individually, enhancing a sense of audience, raising awareness of errors, and fostering a sense of ownership (Tsui and Ng 2000; Hu 2005). Although paper and pencil peer revisions in class are still offered, the discussion tool on the Blackboard platform (see Fig. 2) serves students to revise one another's messages.

Although peer revision is encouraged, feedback from teachers is unavoidable. In class, when providing feedback, teachers need to address both form and content and demand that students pay attention to feedback when rewriting the text. Although that way of providing feedback is an arduous and time-consuming task for the teacher, it is the best way (as far as we know) for students to learn from their errors. Otherwise, corrected writing tasks end up—in the best of cases—buried in the students' folder and the feedback provided is scarcely paid attention to. If students are to rewrite the text, the teacher's feedback must be orientated toward the changes needed, but teachers should not replace errors with the correct equivalent. In order to revise formal errors, our suggestion is to mark the mistakes the student makes with an error coding system (e.g., *VT* for a verb tense error, *AG* for lack of agreement and *SP* for a spelling mistake), so that the student can correct lexico-grammatical errors.

When assessing the essay as a whole, teachers' comments can focus on four areas: content and ideas (i.e., effectiveness of thesis, support for ideas, logical argumentation and conclusion), organization (i.e., how ideas are organized into paragraphs, cohesive devices to link paragraphs, length, layout and presentation), expression and language (syntax, vocabulary, grammar, mechanics, register and style; to assess this area, both formal mistakes and correct performance should be considered), use of sources (i.e., effective and appropriate use of sources and referencing) and audience (i.e., respect for the audience, taking into account counterarguments). Most of these areas of evaluation are in accordance with the suggestions given in Smallzer's(2005a for self-correction and 2005b for advice on teacher's

assessment) textbook *Write to Be Read*. The Blackboard platform can be used to design evaluation sheets with criteria for correction, so that students know which areas need improvement and which do not. Fig. 4 shows an example of a fragment of the evaluation sheet used in one essay graded using the Blackboard platform (see Acknowledgements).

A common practice in some American academic institutions these days is using writing rubrics to evaluate compositions, which offer 'a more objective form of grading' (Stroo, personal communication, August 25, 2013). A new version of the Blackboard platform (Blackboard Learn 9.0) is now available. This new version includes a more sophisticated evaluation tool that allows inserting comments directly onto the student's document on the platform (see Fig. 5).

One final word of caution regarding this way of correcting should be given: For this work to be carried out within sensible time constraints, the number of students per class should be about 15–20, although this is rarely the case. When the number is two or three times that, the correction work is overwhelming and the teacher's supervision of changes between drafts can only be superficial. The only possible solution when managing large numbers of students is to require fewer tasks. It seems preferable to have them write less but with more reflection and care than it does to have them write more without those considerations, but this only provides a holistic mark that does not tell them much about their writing skills.

Finally, although platforms such as Blackboard prove to be a very useful tool for teaching writing, some problems arise when fulfilling tasks: Students with lower to no computer abilities are resistant to use them or simply do not know how, and some students may not have easy access to the Internet. Technical problems sometimes

Fig. 4 Evaluation sheet example from Blackboard Learning System CE8
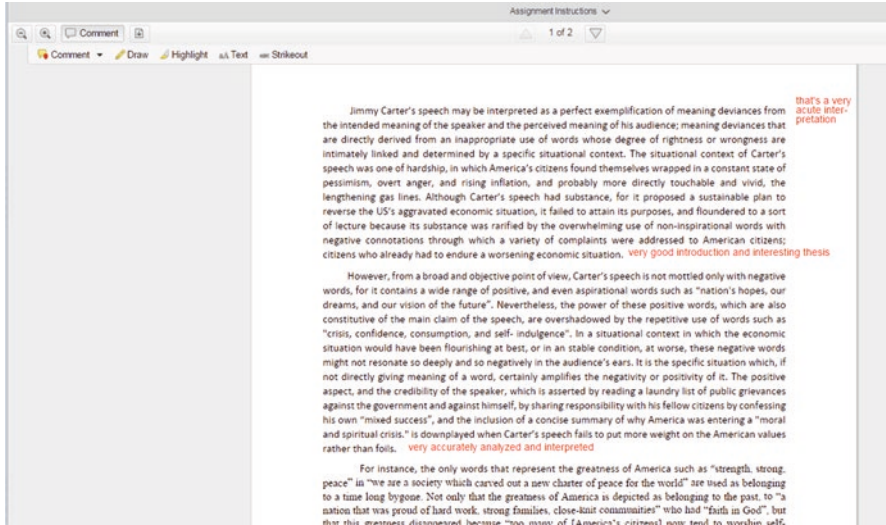
Fig. 5 Example of an essay evaluated on Blackboard Learn 9.0 with teacher's feedback

occur, and, of course, teachers may encounter difficulties when manipulating platform tools when they are newcomers to their use.

4 Conclusions

In this chapter we have discussed how the Internet can make the process of writing easier. It is a fact that cannot be ignored that our students belong to the ICT era and, as such, are much more motivated to fulfill difficult tasks such as writing if it is done on the screen. They are also skillful at browsing the Web, and we can help them find its potential for scholarly work. If we are honest, we should recognize that as teachers and researchers well versed in experimentation, we browse the Web in search of ideas for teaching and sources for our own writing. Thus, why not incorporate the Internet in the teaching of writing?

Depending on the writing phase, Internet resources can be exploited in different ways. In the planning stage, tools for generating ideas can be found on the Web: mindmapping tools, graphic organizers, discussion forums in platforms or other Web 2.0 applications. The Internet is also a powerful source for documenting writing. As for the writing phase proper, there is an abundance of information on rhetorical conventions on how to write five-paragraph essays and paragraphs and about learning how to acknowledge sources correctly to avoid plagiarism. Tools for revising the written work are also available on the Web. One of our aims for future teaching and researching is experimenting with the evaluation tool in the new version of the Blackboard platform in order to check whether students do improve their writing after classmates' and the teachers' feedback.

Notwithstanding all these advantages the Internet provides, they are of limited use without teachers' careful planning and supervision: the roles of lesson designer, information provider and classroom manager cannot be replaced by the Internet. The pedagogical proposal suggested in this paper is rooted in deep reflection derived from teaching experience and sound research. Furthermore, the Internet should never replace print media as a source for information. All in all, using the Internet to teach writing instead of more traditional tools basically means adapting methodological principles based on sound research to twenty-first century technology.

Appendices

OUTLINE:

I.   Introduction

A. **What introductory technique is suggested?** A quote with explanation about the topic.

Thesis statement: A monarchy doesn't make sense in contemporary Spain due to the anachronism, the lack of democracy, the expense that supposes to all the Spanish people and the current crisis of the Crown.

II.   **Body (what order and pattern?)** Examples, comparison and contrast.

A. **First major point:** Monarchy is not democratic and it's anachronistic.

1. **Reasons:** The King is unelected

a. **Evidence:** One became a king just because he is the son of the previous one.

b. **Evidence:** His election is not desire by the people.

2. **Reasons:** It hasn't any point nowadays

a. **Evidence:** He helped a lot during the transition of democracy.

b. **Evidence:** However, nowadays the King is a useless figure.

B. **Second major point:** The expense that supposes to the Spanish people

1. **Reasons:** The King costs a lot of money to Spain.

a. **Evidence:** The State has to give him and his family an amount of money.

b. **Evidence:** This amount is huge, and they have a lot of money.

2. **Reasons:** Spanish people do not want to maintain the Crown.

a. **Evidence:** They have to pay a lot of taxes.

b. **Evidence:** The crisis.

C. **Third major point:** The current crisis of the Crown

1. **Reasons:** The case of corruption of his son-in-law

a. **Evidence:** His son-in-law and his own daughter are involved in a case of corruption.

b. **Evidence:** The position the Royal House has taken doesn't make Spanish people very pleased.

2. **Reasons:** The King has lost popularity.

a. **Evidence:** He used to be considered very close to the people.

b. **Evidence:** Now people do not identify with him.

III. **Conclusion**

• **What concluding technique?** Summarize

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Learning Management Systems for Teaching at University Level: Students' Attitudes and Real Usage in the Classroom

Antonio Jurado-Navas

Abstract This chapter aims to present a group of undergraduates' attitudes and real experiences with online management platforms in the classroom. The students involved in the present experiment were enrolled in a university course in English for specific purposes. The use of online management systems by university instructors has been limited to the upload of documents for students to consult; as a consequence, an alternative and more updated classification of tools and uses is described here, combining online and offline employments of such platforms. Using a socio-constructivist theoretical framework, online interaction among the different agents in the classroom is analysed, having the following results: Participants in the study manifested their preference towards small group interaction, communication and the online distribution of information as opposed to big group sessions and error-focused instruction. At the end of the chapter, further implications in group dynamics are also offered.

Keywords Undergraduates • Attitude • Real experiences • Online management platforms • English for Specific Purposes • Combining online and offline employments • Socio-constructivist theoretical framework • Online interaction • Small group interaction • Communication

1 Introduction

It is a truth universally acknowledged that teachers want to use online learning platforms, so-called learning management systems (LMS). The present paper aims to describe a group of undergraduates' perceptions towards learning management platforms and LMS uses in a course of English for specific purposes (ESP); however, no technical implications will be described in this article. In this case, the authors

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understand an LMS to be a toolbox of programmes and online activities to support learning.

Research has overwhelmingly shown teachers' attitudes, aptitudes, expectations and uses of LMSs in the university classroom (Garrote and Pettersson 2007). However, to the authors' knowledge, there has been no examination of students' perceptions and academic use of these systems from a curricular standpoint.

LMSs have been designed to offer flexible online platform options that are meant to be effective and student centred. As students can be considered digital natives nowadays, they do not need much training regarding virtual platform usage; on the contrary, some teachers may require specific instructions on how to edit their course platform and upload documents or design tasks. However, evidence suggests that training does not suffice: Experienced teachers tend to use LMSs merely for the distribution of documents, therefore making a mainly offline employment of this pedagogical service (Blin and Munro 2008; Bongalos et al. 2006; Slevin 2000; Wan Ng and Gunstone 2003; Wenger 1998).

2 LMS Tool Classification

Various tools and resources can be found in LMSs. According to Garrote (2012), available tools in LMSs can be classified regarding their users and use mode:

- One-way use: from the teacher to the learner, e.g., file uploading. In this type of tool, the teacher uploads a document attached to a message and students can access it and/or download it.
- Two-way use: from the teacher to the learner, from the learner to the teacher or among learners, e.g., emails and personalised messages. In this case, LMSs offer a personalised chat and email systems that function as email structures.
- Interaction boards: e.g., forums and news boards. These tools allow for the posting of messages online, either by the teacher or by the students, that can be read by all class groups or just by a selected number of readers. A board's configuration determines whether students will be able to respond to those messages or not. Pictures, sound files and text files can be also attached to the forum messages.
- Course administration tools: only available to the teachers or the course administrators. In this case, these tools serve as course organisers.

All the aforementioned activities can be found in the LMS we are describing in this chapter. As undergraduate students of ESP, users can participate in forums, and they are requested to upload task files as part of their course curricular requirements. The LMS offers learning opportunities for them to practise English in an online context, to write and answer in English whenever they make an intervention and to upload their English exercises.

Teachers and course administrators can visualise learners' tasks and online movements while they are logged in, as activity graphs and records are available. This inner and privileged perspective from the inside of the LMS is crucial for the

understanding of students' behaviour in these online contexts; as we will see later on in the results of this study, students' attitudes towards the LMS sometimes make a contrast with their actual use of virtual platforms.

3   Theoretical Framework: Socio-Constructivist Theories to Describe Online Interaction

Behind the recent European reforms in the educational system at university level there is the notion that 'learning is an active and a constructive process' (Nie and Lau 2010, p. 412). The new Bologna regulations imply a change in the traditional teaching models, which no longer perceive learning as mere knowledge assimilation and transmission but as the making of meaning according to individual capabilities (Guey et al. 2010, p. 111). The long-established learning perception has therefore suffered the following transformation, as Fig. 1 shows:

Social-constructivist standpoints determine that meaning is made up by individuals as they connect with the world they are experiencing (Glasersfeld 1995, pp. 3–13). Consequently, constructivist meanings cannot be objective but are individual and experience based: students build up their meanings on the academic world and L2 skills depending on their own experiences in the field; we have consciously rejected the radical objectivity of previous theoretical foundations in favour of a more humanized view of the building of L2 academic knowledge. These assumptions have modified learning notions accordingly. Crotty defines this new theoretical approach as the fact that all knowledge

> is being constructed in and out of interaction between human beings and their world, and developed and transmitted within an essentially social context . . . there is no true or valid interpretation of the world. There are useful interpretations. (Crotty 2003, p. 42, 47)

Social constructivism does also consider the inclusion of academic attitudes in the teaching/learning process. Attitudes—together with concepts and at the same level with them—help to build up the whole final outcome of a learning process: They make students more receptive or more reluctant to learn. When considering attitudes as an explicit part of the learning process, it is implied that we can work on them in the classroom by promoting positive reactions towards the learning activity. In fact, the creation of an affective environment in class is basic for a good interaction; it is also necessary for the understanding of contents and, more importantly, for

Fig. 1 Learning process transformation
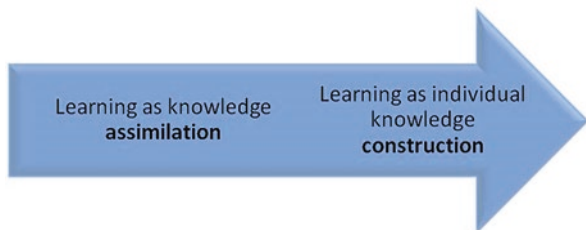
their assimilation. Attitudes, therefore, will be always behind the learning and use of certain strategies in L2 practice.

4 Social Interaction in Higher Education: New Ways of Learning

In such a complex educational environment, social constructivism considers students active doers in their learning processes, making them competent language users. This idea of competences is the basis of learning in the new European Higher Education Area (EHEA). The new EHEA framework aims to consider the social dimension of learning by promoting competences such as students' autonomy in the classroom and online; likewise, social constructivism takes these collaborative variables into consideration (Pérez et al. 2009, p. 9; Taillefer and Muñoz 2011). Social constructivism perceives learning and cognitive development to be the result of social interaction and repeated exposure to language use by other peers (Murphy 2008, p. 84). This is something that can be practiced in LMS virtual activities thanks to the great potential for interaction between students and teachers and among students themselves.

As we will see later on in the pedagogical implications of this study, social constructivism is the basis for collaborative environments, where knowledge is socially and cooperatively put up. The Common European Framework of Reference for Languages (CEFR) is an example of the creation of a widespread academic agenda to evaluate language performance; such a programme is related to also having a common EHEA background to share values and authorize certificates without frontiers. LMSs have played a key role in this common European environment, where online courses bring local and foreign students together. Massive online open courses (MOOC) are now a feasible option in this context too.

Regarding the EHEA background discussed in this paper, students' learning is very much based upon their own interactions with peers and upon their academic context. This new EHEA learning environment has been highly influenced by ICTs, since nowadays at least 60% of students' working time is spent online. In all this process of social construction of meaning, the teacher is present at all times, also having the power to intervene at any moment. In addition, LMSs prepare students for their professional future, which will surely take place in a collaborative environment and be teamwork coordinated and where online technologies will be the basis of daily work and business organisation. We believe the social interaction and construction of L2 knowledge brings dynamic settings where students can improvise in L2, make peer corrections and interact with the teacher online. For a deeper understanding of their attitudes and behaviour, we have used questionnaires, as we explain in the following section.

5 Research Methodology: Questionnaires for the Analysis of Students' Perceptions of LMSs

In this study, students' attitudes towards the use of virtual campuses were measured by means of questionnaires. The questionnaire's aim was mainly to investigate communicative purposes of LMSs in the learning of a second language at the university level, but it also investigated students' attitudes towards the use of online platforms in different subjects.

5.1 Questionnaire Items and Questionnaire Implementation

The research questionnaire was implemented at the beginning of the academic year 2010–2011, in the compulsory courses entitled English Applied Linguistics and English for Specific Purposes in the English Studies program. The questionnaire was published online on the university's virtual platform, where all students could access and respond to this survey anonymously. The questionnaire was created as a research tool in the university platform, so its design and format were compatible with students' online accounts and service. Before its use, the questionnaire was sent to an international group of experts who revised and validated it.

The amount of time that students could use to complete the questionnaire was not restricted. However, due to the technical features of the university platform, students had to complete it once they logged in since they were not able to save changes and complete it for later. This option presented a clear advantage regarding the questionnaire's completion: Subjects had to finish it once they started. In this way, we avoided students' rethinking answers since they did not have time to see questions or plan answers in advance.

The questionnaire's contents are directly or indirectly related to academic skills and the use of online technology in the teaching/learning process. Some questions, as can be seen in Appendix, aim to collect subjects' experiences and perceptions about LMSs in order to better implement their use in the classroom. Questionnaire items are varied, including multiple choice questions as well as open questions. The purpose of this question combination is to collect students' opinions in a variety of ways, since some prefer open questions, while others prefer short answers, multiple choice or other types. The results of this questionnaire survey are mainly quantitative, although this questionnaire contains some open-ended answers (such as the 'other' options in some questions) that have required qualitative analysis.

We are aware of the questionnaire limitations in terms of topic coverage and technical development. On the one hand, questions have been narrowed down to the students' current situation and context; on the other, questionnaires cannot be stored in a file to be seen offline. Results were collected online and only statistics could be saved up and stored.

5.2 Study Subjects

Final users or study subjects in this study were undergraduate students of English Studies at University of Málaga. They were 65 participants aged between 23 and 26 years old whose mother language was Spanish, although some of them were native English speakers. They were all enrolled in courses entitled English Applied Linguistics and English for Specific Purposes and completed this questionnaire by logging in to these courses' online platform.

The sampling procedure we followed in this study is the so-called 'cluster sampling' (Dörnyei 2007, p. 98). This is a way of making a practical random sampling by selecting previously established units of subjects; in this case, we chose graduate students enrolled in the target English studies courses listed above.

6 Study Results: Difficulties in Learning and L2 Reading Skills

The results shown in this study might be surprising in terms of students' attitudes towards online technologies for learning. The students' responses showed that they no longer perceive LMSs as innovative teaching tools: it is the teacher's use of these systems that raises their interest in a subject. Furthermore, despite their everyday use of the Internet, learners' exploitation of LMSs is low; we believe teacher training and students' information are the solutions to this problem.

When analysing students' responses to the research questionnaires, the first issue worth commenting on involves the initial academic and personal data given by every participant at the beginning of their survey. When asked about the number of linguistics courses they had failed in pursuing their degree and the amount of online work they had carried out, students who had failed two or more linguistics courses had made less use of the university virtual platform and vice versa: Participants who had not failed any linguistics courses during their degree program had used LMSs more frequently. Similarly, the latter are more acquainted with Bologna Process university degrees, which guarantee a credit system (European Credit Transfer System) that facilitates recognition of qualifications when the students are doing a course in another European university, and also with the new regulations regarding online work.

In the first question, most students state that vocabulary is the L2 area they very often struggle with, as indicated in Fig. 2:

Vocabulary is particularly relevant in an ESP course where curricular contents are related to specific terminology, and here is where LMSs play a key role. Vocabulary and terminology exercises are easy to design and upload onto online platforms, giving students opportunities for vocabulary learning while interacting with other students in real time.

Fig. 2 Most difficult L2 areas for students
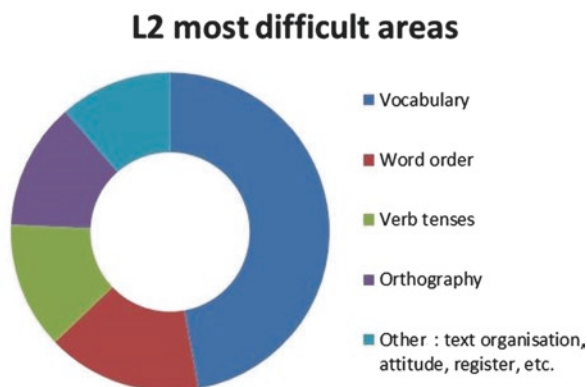
Fig. 3 Reading skill importance and dictionary use by ESP students
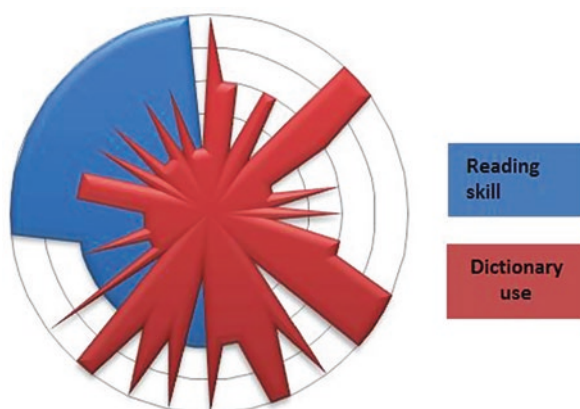
Questions 2 and 3 show interesting results when dividing language skills into oral abilities (listening and speaking) and written ones (reading and writing). Those participants who consider oral skills to be more important when learning a second language make frequent use of the dictionary, whereas students who prefer written abilities only sometimes or never use it. Figure 3 illustrates the connection between the importance of reading skill and dictionary use:

Results indicate that reading as an extensive activity favours meaning inferred from the context. When extrapolating these results to LMS contexts, we can see that LMSs allow for the practising of all language skills through various exercises; students can also configure an online dictionary collaboratively.

7   Study Results: Learning Motivations and Preferences in the Language Classroom

The results in Question 4 are relevant in terms of LMS knowledge and usefulness in learning environments. In this study, 80% of participants said that they felt that LMSs and virtual campuses did not have a remarkably positive effect on L2 proficiency. As we can see in Fig. 4, LMSs are still not perceived as learning tools or learning help.

This apparent anti-LMS attitude in Question 4 is reinforced by Question 5 results: The use of technology or innovative materials in class is not considered to be crucial in the learning process. On the contrary, attitudinal issues are perceived to be truly influential for students, who value teachers' attitudes and their own in the teaching/learning process. We interpret these results as indicating that LMSs have yet to be used with real engagement from teachers or students.

Finally, Questions 6 and 7 give some positive evidence in favour of the importance of cooperative work in the learning of a second language at the university level. A communicative focus when learning English in an ESP course was preferred by 77% of students, meaning that they are eager to practise, share and communicate in English with peers (see Fig. 5):
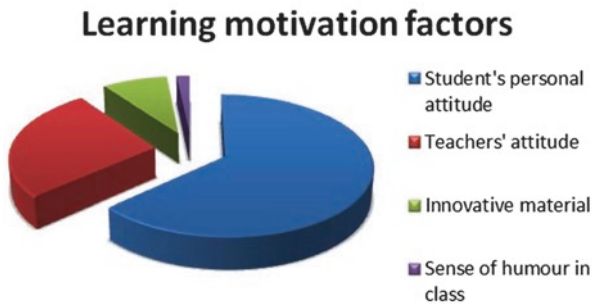
Fig. 4 Learning motivation factors

Fig. 5 L2 preferred focus in class
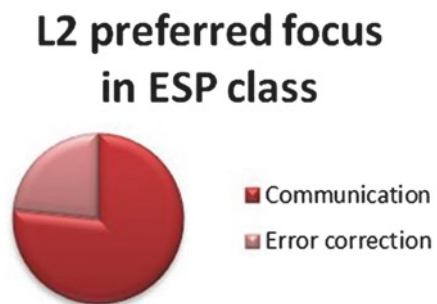
Fig. 6 Preferred classwork modes in ESP course

Classwork mode

- Small groups
- Pairwork
- Individually
- Big groups
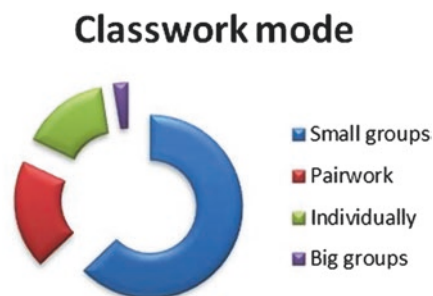
As far as classwork modes are concerned, the last questionnaire item indicates a clear preference of participants for small groups and pairwork, as shown in Fig. 6:

More than ever before, socio-constructivist theories explain teacher-student and student-student relationships and interactions, since virtual materials, forums, chats and other resources are made collectively. This means since learning is done cooperatively, social processes and interactions contribute to and shape learning. Students' roles are crucial in creating dialogue and learning specific discourses as LMSs enhance online dialogues and exchanges.

As we can see, attitudes and motivation are very much valued by our study subjects. These aspects are key in encouraging and engaging students in the learning process, especially when learners have to take part in forums, online activities and group chats.

8   Actual Use of the LMSs by Graduate Students Participating in the Study

From the results stated above we can conclude that regular use of LMSs by linguistics students results in better academic outcomes, since these learners' academic scores in linguistics subjects are higher than those students not using LMSs so often. However, questionnaire results ironically reveal that most students still do not feel that LMSs can have a positive effect on their L2 written performance, as Question 4 results show. There is a need for an open awareness of LMS usefulness; this could be achieved by means of teacher training and LMS student information seminars.

Students feel they are an important part in the construction of their knowledge when they participate in LMSs online; however, results reveal that new technologies can never be a substitute for teachers' personal motivation and encouragement to students. It is in the blending of these two online and offline areas that undergraduates seem to find their comfort zone when learning.

Pedagogical implications can be easily drawn from Questions 6 and 7 in the questionnaire. Participants perceive communication as being more important than error correction when learning a second language. This means that students

understand language learning as a communicative process in which L2 has to be put into practice. However, despite this preference for communication over error correction, Spanish students are not yet acquainted with learning communicatively via LMSs, as their scarce use of this online technology shows.

In addition, subjects' answers to the last question in our survey also show their inclination towards working in small groups in class. Small grouping in ESP lessons is a teaching technique that favours constant communication and language exchange among students. As EHEA guidelines suggest, cooperative work is part of the learner's academic competences that need to be acquired before graduating (Murphy 2008, p. 83). LMSs allow for cooperation in small groups, for example, in wiki activities, where students are divided into fours or fives to write an online document in cooperation with each other.

LMS activities imply a certain degree of autonomy in students, who have to be able to control some learning aspects in terms of timing and task organisation. These time-management abilities have to be learned in order to combine LMS activities and classroom activities effectively. A better organisation and understanding of their academic activities (off- and online) could improve LMS exploitation. When learners' LMS activity is analysed, we can see that their actual use of the different LMS tools is as follows (these descriptions have been taken from linguistics students' logs in records in the University of Málaga virtual platform prior to the writing of this paper; Taillefer and Muñoz 2013):

- *Tools for distribution of information*: These mono-directional tools are the most frequently used by logged-in students. With them, learners can download files and/or read specific information related to the subject, such as academic notes, exam information and notices. There is no real communication in these distribution contexts, just the posting of relevant information regarding their course.
- *Tools for communication*: These bi-directional tools allow for some teacher-student communication or student-student conversations via forums and news boards. In this case, it is normally the teacher who posts relevant comments or notices on communication boards, and then some students answer that post. There is no real interaction in these communication contexts and students do not engage in a conversation in the different forum threads.
- *Tools for interaction*: Tools for interaction are also bi-directional tools that trigger online real-time interaction among class members. Generally speaking, undergraduate students in our context rarely used the online platform as an interaction tool. Interaction was kept to a minimum and it was only with the teacher (via platform email, for instance).

When actually comparing and contrasting their questionnaire answers with their LMS use, we can conclude that Spanish undergraduates do not use LMSs for cooperative work purposes; rather, they prefer to be passive users in their learning platforms; these results coincide with others in similar contexts in Portugal (Carvalho et al. 2011). They normally log in to download notes and printable materials; some of them leave a forum message asking for some extra information or expressing a doubt. The collective potential of LMS seems to be underestimated by the students.

9   Pedagogical Consequences of LMS Use: Discussion and Conclusions

One of the reasons that LMSs are underused in class might be the lack of teacher training in the field. In the Spanish university context where this research was carried out, teachers and professors must do some teaching and monitoring online, something many of them have never experienced as students before. Consequently, technical and procedural issues arise, such as the way contents should be uploaded in the system, students' registration problems and methodological dilemmas on how to structure and time lessons during the year. Moreover, because teachers are in charge of encouraging students to participate in forums and assignments, they must assimilate the importance of shared values in a learning community; in order to accomplish that, teachers must overcome their resistance or fear of change (Brill and Galloway 2007).

These procedural and methodological aspects are related to Richards' (2008) dichotomy of 'knowledge about and knowledge how' (p. 162). *Knowledge about* brings what has been established as the official curriculum, whereas *knowledge how* is explicit and practical knowledge, which is useful to share in LMS.

In order for students to be able to share their knowledge and know how to do things, they have to be clear on their roles and identity as online LMS users. Students' involvement in a learning platform might be conditioned by how they perceive themselves and how they perform their roles within different learning contexts. The question here is: Do teachers and students know about their LMS identities and roles? Do they know how to talk and participate in an online community of practice?

LMSs follow certain teaching principles that not all teachers and students are aware of. In terms of class preparation, online community sessions need activities to be well planned in advance (Farrell 2008, p. 234); even though there is much degree of improvisation regarding students' intervention, task goals and methodology must be clear in order to have meaningful outcomes. As Murphy points out (2008, p. 84): the responsibility for a course's good development rests largely with the design of the learning materials; teachers' commitment to LMS use will condition group dynamics regarding virtual platforms in class.

The benefits of a dynamic and participatory use of LMS in an ESP course include the following:

- Social perceptions on learning and sharing: The learner moves towards cooperative modes of learning.
- Identity construction and learning of online community rules.
- Continuous practising of cross-curricular competences, that is, not only course contents but also procedural knowledge, practical interaction and, in the case of foreign language learning, L2 real practice in interaction.
- Networking and dialogue construction.

In the particular case of second language learning, and more specifically the learning of a language for a special purpose, LMS offer a wide range of language

practising tasks to be done in cooperation, both for written and for oral skills. LMS for ESP courses allow for videos and listening exercises with a clear professionalising goal: how English is used in companies, hospitals, interviews, marketing etc. Vocabulary and terminology are also important resources to be considered in this online teaching context.

Through participating in group conversations and forums, students validate their own knowledge and procedures or possibly reshape those by means of dialogue with others. LMS dialogue is not always real-time chatting or forum dialogues: LMS discussions imply text comments, wiki constructions, journal writing and peer correction. These provide real learning opportunities and true language acquisition in use.

All in all, interaction, learning communities and collaboration are not how LMSs are being used at the moment in this university context. However, we know that cognitive development does require social mediation: Acquired knowledge is better assimilated when put into practice and when shared and discussed with other peers and with the teacher.

Little is done to promote the use if and interaction with LMSs by teachers and students; it seems as if they are a new technological language that we all have to learn in the classroom. However, LMS use could be fostered with more teacher training and by bearing in mind LMSs main features: participation, opportunity creation and negotiation.

Sociocultural theories and social constructivism focus on the concepts of mediation, social interaction and participation structures; these interaction modes theoretically support LMS dynamics. Computer support for cooperative learning is currently an open area of research where new online activities that create language-practising prospects can be found and developed. Students' preference towards working in small groups and their eagerness to participate in motivating tasks seem to be the perfect ground upon which to build online interaction.

Appendix

Personal and Academic data	Date:
Name	
Gender	
Date of birth	
Have you ever failed any English linguistics courses in the program?	
If so, which one(s)?	
Academic mark in last year's English linguistics course:	
From 0 to 10, how much of your study time is done via online campus?	

1. Please indicate: What do you find most difficult when using English as L2?

   __Vocabulary   __Spelling   __Verb tenses   __Word order in a sentence

2. Please put these linguistic skills into the correct order, according to relevance and use (1 being the most important and 4 the least):

   __Listening   __Reading   __Speaking   __Writing

3. How often do you use a dictionary?

   ____Very often   __Often __Sometimes   __Never

4. Do Virtual Campus and online forums, as new European Higher Education Area communication techniques, help in the Learning of L2 reading and writing?

   __I think students' L2 proficiency will be improved
   __I think their use will not affect L2 proficiency

5. Please number the following motivation factors in the learning of English as L2 (1 being the most important and 4 the least):

   __Teacher's attitude in class   __Innovating classroom materials
   __My own attitude   __Classroom learning environment

6. Which do you consider more important in a university L2 English classroom?

   __Communication   __Error correction

7. How do you prefer doing classwork?

   __Big groups   __Individually
   __Small groups   __Pairwork

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English for Academic Purposes: A Proposal to Improve Listening Skills of Education Students

Ana María Ramos-García

Abstract Most students report that their listening skills are poor and that listening activities make them anxious. It is necessary to develop a work plan to improve their attitude towards such activities. This contribution tries to highlight the importance of enhancing the listening skills of education students in order to improve their results in compulsory English courses and reduce their fear of listening activities. Such fear is due to their lack of training in these skills. Increasing the exposure of students to real input in an anxiety-free environment can gradually improve their listening skills. I propose a one-semester parallel extensive listening programme in which students are given instructions to follow. This programme considerably improves students' listening strategies and also leads to significant changes in students' attitudes toward listening activities. Self-confidence reduces students' fear and anxiety, leading to better results. The activity is part of students' compulsory TEFL course; students record their progress in an online diary on the course platform that is discussed with the teacher in a personal interview.

Keywords Improve listening skills • Lack of training • Work plan • Exposure to real input • Anxiety-free environment • Listening programme • Students' listening strategies • Self-confidence • Online diary • Anonymous evaluation form

1   Introduction

According to the occasional paper of the English Teaching Information Centre (ETIC 1975), English for academic purposes (EAP) 'is concerned with those communication skills in English which are required for study purposes in formal education systems' (Jordan 1997, p. 1). Thus, EAP 'covers interactive lectures, student presentations and supervisions and office hours'. (Lynch 2011, p. 79).

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It should be noted that most students have problems addressing lecturers in person or by email or handing in assignments because they have not mastered academic 'etiquette', even in their own language. Hence, these academic formal requirements should also be included in university courses. Besides, the current goal of internationalising studies at Spanish universities requires undergraduate and graduate students to have better command of foreign languages (FL) and particularly of the academic register in FL. Consequently, any university degree should include both EAP and English for specific purposes (ESP) in the curriculum.

There has been a broad debate on the terms that should be used to refer to the idea of teaching English at higher education level: ESP, EAP or other options, as shown by the literature on the topic (Jordan 1997). However, I would like to reduce the scope to English for academic purposes, referring to the language students need in order to follow the instructions they receive and operate in academic settings in English. The context in which this EAP proposal is put forward is not an English-speaking context in which overseas students must adapt to the academic standards of native speakers but an English foreign language (EFL) context, as referred to by Jordan (1997): 'the students may need EAP for higher education in their own country' (p. 2).

This context is different from that of foreign students in English-speaking countries, where the language skills required to follow instruction in English are undoubtedly higher. The difference is based on the idea followed at the University of Granada, where courses are taught in English with activities in English, but this takes place in the context of a Spanish-taught degree rather than an English-taught degree, as would be the case of modern languages or bilingual degrees of any kind.[1]

The context is a compulsory 6 ECTS (European Credit Transfer System) teaching English as a foreign language (TEFL) course for pre-primary and primary education students at the Faculty of Education at the University of Granada, Spain. The course is either a first-year course for pre-primary teacher trainees entitled Lengua Extranjera y su Didáctica (Foreign Language and its Didactics) or a second-year course for primary teacher trainees entitled Idioma Extranjero y su Didáctica (Foreign Language and its Didactics). Both courses combine English as a foreign language with foreign language teaching methodology for very young or young learners. They are compulsory for all students enrolled in these degrees, although only some students are focused on becoming English teachers and hence are interested in English in a professional setting. There are approximately 15 groups of about 60 students each in both degrees (10 in primary education and five in pre-primary education).

The target students are therefore teacher trainees taking their first steps in higher education. The course could also be considered as an ESP course, as it also deals with how to teach English in pre-primary or primary education. Yet I consider that the scope of EAP is greater than that of ESP. Based on our experience, such students have heterogeneous English language proficiency but their average level is rather low. They are supposed to have reached a B1 level after completing *Bachillerato*

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[1] There is a bilingual group in the primary education degree whose characteristics regarding the English language are not comparable to those of the other groups.

and *Selectividad* (the Spanish equivalent of A-levels). Yet, most of the time this is not the case, although there are some honourable exceptions. In fact, students in Andalusian universities are required to prove B1 level in a foreign language to obtain their graduate diploma.[2]

Another issue taken into account in this proposal is that teaching youngsters or young adults requires updated knowledge of the use of information and communication technologies (ICTs) for the development of sessions, activities and tasks. In such a context, students should be able to use ICTs as they do in their everyday life to enjoy themselves, communicate with peers or prepare assignments. It should be noted that young people use the Internet more than libraries and communicate through Facebook or WhatsApp, for example. Thus, if we allow them to use the same tools—but not necessarily the same platforms—when learning they will be more engaged in the tasks they are asked to perform. This will reduce the gap between the way they live and communicate and the way we teach.

Two issues should be taken into account: First, we should use a 'language' our students can better understand, that is, include elements that they associate with their free time (e.g., ICTs), expanding them to the learning sphere with an unmistakeable teaching intention; second, students should gain better knowledge of the use of ICTs for teaching in general and specifically for FL teaching—which is the subject of the present chapter—if they are going to study TEFL for pre-primary or primary education.

2 Course Outline

My main concern as an English teacher trainer is to improve education students' communication skills so that they can become competent primary English teachers in the future. Teachers need to be excellent speaking models for their students, particularly in the current bilingual teaching context in Andalusia, the region where they are being educated.

Both TEFL courses consist of two parts. The first is devoted to language learning and the second is devoted to English language teaching (ELT). They both last for one semester, comprised of 30 h of theoretical lectures in clusters of 2 h each plus 15 practical sessions. The group is divided into two halves for the practical sessions. The syllabus is quite ambitious and there is not enough time to devote to language learning issues, as students do not have any previous methodological background but are used to studying foreign languages. For this reason, we tried to design or find parallel-language activities students can perform at home on their own. I consider that this helps students—particularly those in their first year of University—to get used to working on their own and become aware that they have to play an active part in their learning process, not only in this English course but throughout their

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[2]Levels are established according to the Common European Framework of Reference for Languages (CEFR).

university studies. This is one of the key arguments of the philosophy of the European Higher Education Area (EHEA), although students dislike it. They complain when they have to work alone or in groups without the supervision of their teachers, although they prefer working alone than in groups. It seems that students would be much more comfortable if teachers maintained their traditional role of explaining everything through master classes and the assessment consisted of one final exam. However, the goal is to prepare students for lifelong learning and encourage them to be professionally active.

Considering the above-mentioned points, a decision should be made: Students' needs make it quite difficult to cover both parts of the course (i.e., English as a foreign language and foreign language teaching methodology) at the same time. Thus, in the English learning part, I think it is advisable to make students work on their own (individually or in small groups), practicing contents or parts that they are already familiar with (e.g., grammar revisions and activities). Such outputs can be corrected and explained either in individual interviews or in class as needed.

The sessions of the courses are not as like lectures as they used to be a few years ago. The changes promoted before implementing the EHEA were aimed at ceasing to consider master classes to be the only way of teaching. As a result, students have to express themselves more often during their courses in short seminars or tutorials. The main problem faced by both students and teachers is that students do not participate easily in conversations in class if they must do it in English, as they prefer to participate in their mother language Teachers can use different strategies and engaging activities to foster the participation of students, which is not always easy.

3   Materials and ICT in the Classroom

If we really intend to change the methodology of our lectures, we recommend using different materials accessible on the Internet instead of using handouts, for example (e.g., Oxford list of frequently confused words[3]). This is environmentally friendly, as it avoids the use of paper and reduces photocopying expenses for the department, which is advisable in the current financial situation. Finally, it makes students actively participate in their learning process, as they take responsibility for their learning. Students are required to look for their class materials and by doing so may find other resources that better fit their learning style. We can also recommend various apps to practise listening and pronunciation skills using students' cell phones or tablets.

The aim of including ICTs in our classes and courses is to take advantage of the opportunities provided by the Internet to teachers, without forgetting that learning is the main goal.[4]

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[3] http://oxforddictionaries.com/words/commonly-confused-words

[4] It is easy to recall the days when on of the only opportunities to listen to 'real English' in Spain was to buy magazines such as *Speak Up.* Later, DVDs provided the opportunity to watch films in

Tra demonizzare il computer e idolatrarlo, esiste una via di mezzo: considerarlo semplicemente per quello che è, cioè una macchina, uno strumento valutabile secondo l'uso ched ne viene fatto, così come accade, ad esempio, per un bisturi, che può servire a guarire una persona o ad ucciderla (Garelli and Betti 2010, p. 97).

3.1   Podcasts and Other Web-Accessible Materials

Podcasts are series of audio or video files that are automatically downloaded to a computer or smartphone once a user has subscribed to them. Their main advantage is that students can go on listening guided by curiosity for such materials. They are easy to use and usually free, which is another important aspect for students. There are many kinds of podcasts, ranging from cooking programmes to radio programmes to language courses, which may or may not include additional activities.[5]

The most interesting aspect of podcasts and other Web-based materials is that students can use various materials that are arranged by topics and select them according to their personal taste. Therefore, their interest and involvement in the task is likely to be higher, with a greater benefit for their general language competence (Skehan 2003). In addition, such materials enable shy students to work on their own at home. Nobody will know how many times the student needs to listen to an excerpt to get the gist of it, and the effort required decreases once this is done regularly.

Use of podcasts with language students has been studied in recent years (Meng 2005; Lord 2008; Rosell-Aguilar 2007, 2009; Ramos García and Cortina 2010; Ramos García and Caurcel 2011). Students report that they like using podcasts because they are easy to find. The fact that students can select any topic makes podcasts more attractive and entertaining to listen to than teacher-selected materials. It is also a way of balancing their exposure to the language at home by listening not only to course-related materials but also to those selected by them. Thus, students learn about general non-academic topics that will improve their comprehension in other areas.

Including such materials in the classroom requires a short introduction on how they work, how to locate them, how to use a podcatcher and so on. Today many students know about podcasts, but this was not the case 5 or 6 years ago, when we started including them as materials for our lectures. The Internet provides teachers and teacher trainees with endless possibilities to practise various language skills and a wealth of material to implement in the EFL classroom. These possibilities enable teachers to plan engaging and varied lessons for their students that match their needs and tastes.

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their original language with or without subtitles. Today, the web allows FL teachers to find an unlimited amount of listening materials about a broad range of topics that are suitable for all types of lessons.

[5] For a more academic classification of podcasts according to their origin and use, see Ramos and Cortina (2010).

4 The Importance of Listening

'Listening is a source of frustration to learners and an area in which it seems difficult to make progress' (Graham 2011, p. 113). Taking this statement as a starting point, as teachers, we should start by trying to reduce the frustration of students by giving them clues to succeed and use any resource at hand to help them progress. We agree with the Lynch's (2011) statement made that compared to the other skills there has been little research on second language (L2) listening processes, instruction and assessment (Read 2002). The main reason for this is the complexity in the process of listening and its teaching and research (Field 2011).

Considering the abovementioned points, teachers should start by providing students with the appropriate resources to learn how to listen (Helgesen 1998). This may seem to make no sense but if we look back at our life experience as language learners, most people will tend to agree with this idea: no one—or almost no one— taught us to listen in the sense that we were taught to spell, pronounce words properly, translate or write. Most teachers avoid listening activities because they require time and effort and often bypass such activities because they are always short of time to cover the whole syllabus.

In addition, students tend to avoid listening activities because they generate a high level of anxiety. Therefore, everyone is happy to skip listening activities: Teachers save time and students avoid having a difficult time. A study performed by Bekleyen in 2009 reported 'high levels of listening anxiety among students aspiring to be language teachers, anxiety which these students attributed to lack of attention to the skill from their own teachers' (Graham 2011, pp. 113–114). As Graham (2011, p. 114) stated, based on the evidence obtained by the aforementioned study, teachers may have had bad experiences with listening activities as students; this may have negatively influenced their practice, leading them to try to reduce the feeling of anxiety such activities produce by practising more, but this is not the correct solution to the problem. The solution is to teach and develop correct strategies to conduct a listening activity effectively.

4.1 The Process of Listening

Aural comprehension implies a major effort from students because they must identify sounds that are different from their own, understand words and coherently organize meanings in their minds to understand the whole message. In fact, this activity is much more stressful and tiring than any other kind of activity, such as role-play, writing a composition or reading a text, because most students lack the training to perform it successfully. The underlying difference between these activities and listening is that when we read or write we impose our own pace to the activity. By contrast, when we listen we must adapt to the speaker's speed and tone (Madrid and McLaren 1995, p. 39).

We receive many visual stimuli from the outside world, but we receive many auditory stimuli as well. This predominance of images, voice and music in our everyday life makes it necessary to receive adequate FL training to efficiently perceive such stimuli in real contexts that are similar to those experienced in mother tongue situations. This is why experts insist on the importance of using authentic materials in the classroom. Adapted materials place students in a 'wonderland' that has nothing to do with everyday conversations, but we want students to be able to communicate in real settings.

Effective communication lies in good aural comprehension. Therefore, if we want students to communicate effectively in an FL and have an adequate FL level we should work on listening skills intensely and thoroughly in the classroom and get students to practice at home. Although we may be able to read, write or even speak—understood here as the ability to say something coherently in an FL—these are useless without the ability to understand what we are being told. Why do we study languages if we are not able to communicate? Languages are used precisely to communicate with one another.

This should be the starting point in the classroom: Students are not used to listening to English—at least as a vehicular language in the classroom—and at the beginning of the semester most of them abhor participating in English and prefer to remain quiet rather than to speak English. Yet it should be noted that the language used for teaching is English, so students need a certain degree of comprehension to be able to take notes.

We should bear in mind that grammar, translation and reading were traditionally considered to be the key elements in learning a language. It is time to change that and pay attention to communication in the FL (i.e., listening and speaking) so that teacher trainees realize the importance of being a good model in the FL for children. It may be argued that the communicative approach has been in fashion for a long time, but most students report that they have never or very seldom been taught in English.

4.2   Comprehension Problems Faced by Students

When listening in a foreign language, students must put into practice many different skills and face several problems. However, I consider that the most important problem, which is related to all the others, is their lack of self-confidence, which can be easily solved by frequent exposure to the FL and by grading activities (Hedge 2000, p. 253). According to Hedge (2000), 'if English is available in the community, learners might be persuaded to exploit the available resources in some way' (p. 253). As this is not the case, we propose using real materials that are easily accessible on the Internet to help students practice, because such materials can be easily reproduced wherever and whenever students feel like doing so.

One of the key problems when facing listening activities is that students try to understand everything they hear word for word without discriminating information

in the message. Students are not aware of how they handle similar situations in their mother tongue. They are therefore immersed in a stressful situation that overloads their short-term memory and produces a mental block and prevents them from being able to listen efficiently. A parallel situation takes place when reading: Students tend to be 'dictionary bound' because they want to understand the meaning of every single word without taking the context into account. It is only possible to read fluently once one leaves aside the dictionary and tries to make sense of words by inferring meanings from the context, paying attention the types of words, their position in the sentence and so on. The advantage of reading over listening is that it is possible to reread an excerpt we do not understand. However, this is not possible when listening. This is why students should be aware of the fact that they should focus on key words at the beginning and try to make sense of them in context in further listening opportunities. This is an advantage of recordings over real conversations—which we cannot listen to as many times as we may need—unless we stop our counterparts and ask them to repeat their messages, something that would go against the main characteristics of spoken language: speed and economy. These problems highlight the importance of teaching students how to listen. It is essential to insist on the idea that they are not required to understand every word but content words, to get the gist of the message—this would be like skimming when reading.

Different types of exercises are needed to allow students to make progress from listening to understand general information to listening to understand specific information. It is not only a matter of listening in order to answer certain comprehension questions. The listening activity should be properly introduced—as almost everything in a foreign language classroom—to activate previous knowledge and reduce students' anxiety. Creating that context makes a difference and leads to better results, thus boosting students' motivation and self-confidence.

As has been said before, the difficulty of the task should be adapted to the level of the students, something that is quite complicated to achieve in class because of the broad range of levels. If the number of unknown words is too high, the task requires not only a greater effort but also concentration, causing lack of motivation, anxiety and even exhaustion. This is why our programme can help a lot, as students can work on their own using materials that are suitable for everyone. It is also important to know as much vocabulary as possible. It may be old-fashioned and boring to ask students to study vocabulary but we cannot express ourselves properly without words.

As teachers, we should bear in mind what we want students to listen to or to listen for, adjusting activities and demands to students' levels and abilities. It is important to explain beforehand the main characteristics of colloquial language, slang, accents, differences in pronunciation between and within countries and so on. This will lead students to expect differences and accept them as something normal that also happens in their own country or with their own language (Hedge 2000, pp. 238–240; Ur 2001, pp. 11–21). That is, students who know that a certain accent is difficult to follow will not feel it is their personal failure if they do not understand something for that reason. By reminding them that this can also happen

when listening to someone from a different area in their own country, we will increase their self-confidence.

Some aspects of comprehension are more difficult than others for learners. According to Ur (2001, pp. 11–21), the most relevant aspects are the following: hearing the sounds, understanding intonation and stress, coping with redundancy and 'noise', predicting, understanding colloquial vocabulary, fatigue, understanding different accents and using visual and aural environmental clues.

If we expose students to a wide range of materials, they will get used to listening to a variety of types of English. Hence, their competence and self-confidence when listening will increase. If we want students to communicate successfully in a 'real' conversation, that is, with real informal characteristics (e.g., vocabulary and speed), we should work with colloquial materials without abandoning standard English.

The language usually learnt at school is formal, standard language. Yet, the language of conversations is not as formal as written language and is obviously less formal than academic writing. This is why it is necessary to explain the main differences between spoken and written language and formal and informal style to students. This will lead to more successful comprehension and communication.

EFL materials are usually slower than real conversations. In addition, intonation patterns are varied or exaggerated, pronunciation is clear—usually standard English, structures are repeated for better understanding, utterances are not unfinished, everything is grammatically correct and speaking turns are not overlapped, ellipsis is uncommon and background sounds are rare, if we compare those situations to an informal everyday conversation on a street or in a bar with background noise.

Another key aspect for comprehension is to be able to roughly distinguish between different accents. If students get used to only listening to British English, they will have comprehension problems if they listen to someone from anywhere else. It is therefore advisable to use materials involving different accents, explaining the main differences and characteristics of each of them. This will allow students to recognise them and successfully understand what is being said in a real communicative situation. In addition, they will not tend to underestimate people because of their accent, which has happened in the past, when people with certain accents were laughed at.

All over the world, people in ever increasing numbers are using more and more varieties of English. English has now become the language of international communication. Perhaps the most remarkable fact behind this increasing use of English is that most English speakers are now multilingual people who have learned English and use English to communicate with fellow multilingual individuals. There are currently many more non-native speakers of English than native English speakers. (Kirkpatrick 2007, p. 1).

Real materials reproduce real-life conversations that take place in different environments with background noise (e.g., buses, traffic, people talking or noises in a bar or restaurant). These are the real situations in which we develop our aural comprehension in our mother language, and our aim is to become effective listeners for communication purposes. Some individuals are able to express themselves and make themselves understood without major problems but are inefficient listeners

who need the help of a more proficient listener to know what people are saying to them. They are usually aware of their lack of comprehension, so practicing their listening skills at their own pace can increase their ability to understand people.

4.3   Self-Efficacy in Listening

Graham (2011) argues that 'self-efficacy, broadly defined as the belief in one's ability to carry out specific tasks successfully, is crucial to the development of effective listening skills, and that listening strategy instruction has the potential to boost self-efficacy' (p. 113). This concept of self-efficacy is in tune with that of concept of *confidence* used by Hedge (2000), meaning motivation or self-confidence. All these terms refer to the ability of students to turn all their achievements into a positive attitude toward the task in question.

The environment in which we listen is also important. For example, results will be better if we feel comfortable than if we are uncomfortable, surrounded by people talking or acoustic conditions are difficult. This is why we propose giving students the possibility of listening on their own wherever they prefer to do so. Thus, students can choose their perfect environment for listening without being 'observed' or 'controlled' by peers or teachers.

5   Proposal for a Listening Programme

5.1   Listening: How, What and When

The whole group is advised on how to react when dealing with listening activities, reviewing some examples in the classroom. Students are instructed to listen to every excerpt three times when they are asked to fill in some questions afterwards (as opposed to when they listen for practice): The first time is used to listen for gist, the second is for note-taking, and the third is to verify whether everything is correct or to listen again for missing information.

Next, the teacher explains what the experience is about and why it is positive for them: Whether they like it or not they need to pass their B1 listening exam, so any practice should be welcome.

Podcasts are discussed and instructed on how to select them according to their personal preferences or language needs. After that, they are informed about the materials that are available on the Servicio Web de Apoyo a la Docencia (SWAD; Web Teaching Support Services) learning platform. They are given a handout with basic information on the listening programme, some instructions and web pages where they can find a wide range of listening materials and their diary template. They are informed about the data they are supposed to enter in their diary and how

Fig. 1 Example of diary entry

they should conduct their listening activities (i.e., extensively or intensively). Depending on their preferences, they may listen to their podcasts or files at any time (e.g., while practicing sports or travelling by bus or car) and use a pen and a piece of paper to take notes if they are conducting the listening activity at home or any other place where it is appropriate.

Current technology (e.g., portable players, iPods, cell phones and tablet computers) makes it possible to listen comfortably to the materials proposed almost anywhere. This situation can be exploited to increase our students' listening comprehension by devoting no more than 5 min to this activity every day (or at least from Monday to Friday). Students' problems are addressed in individual or group tutorials, depending on the nature of the problem.

5.2 Diary

Exposure to free listening activities is recorded in a diary so that the teacher can be informed of what, how, when and how long students listen to any material as well as the origin or location of the file, which may be suggested by the teacher or selected by students themselves. An example of the diary template is provided in Fig. 1. The idea is that students should write down important information to evaluate the experience and its results in the shortest time as possible. Otherwise, students would not do it or would consider it as something negative associated with their listening task, which is the important part.

Filling in the diary should help students be aware of the amount of time they have devoted to listening, assess their improvement and decide if the amount of time devoted is worth both the effort and the result. My experience has shown that when individuals become involved and listen to any material regularly (at least 5 days a week) they become motivated and realize that they need to replay the audio files much less as time goes by.

5.3   Personal Interview

The final interview with the teacher serves as an evaluation of the whole process. Students are asked to share their problems and successes and their feelings about the experience with the teacher. They are also asked to assess their own involvement in the process and their listening comprehension.

Diary entries are used to calculate the total listening time per student and to learn what kind of materials they prefer and their favourite topics and where they find them. This should also allow teachers to assess whether the programme has worked well or not, whether it should be further developed and, if so, introduce students' comments into the framework to improve the whole experience for the following years.

6   Discussion and Conclusions

This contribution is merely a proposal for improving the listening skills of education students in a way that is comfortable for them and easy to handle for the teacher. It is not very time consuming or demanding and the benefits are so quick to appear that students are likely to feel highly motivated. Obviously, this method does not work for everyone and depends—among other things—on students' degree of engagement and their awareness of their personal needs as language learners.

This proposal has been designed according to what the students state they need and the results of various innovation projects conducted at the Faculty of Education of the University of Granada (Ramos García and Cortina 2010; Ramos García and Caurcel 2011).[6] Previous individual experiences among my students and relatives with faulty listening have shown that conducting an intensive listening activity for approximately 5 min 5 days a week increases comprehension and particularly motivation and self-confidence (or self-efficacy) among students.

The other language learning skills have not been included in this special programme because they are practiced intensively in the classroom during the course. Written assignments are prepared either at school or at home but are revised and discussed with students individually, speaking activities and oral presentations take place in the classroom and reading activities are the basis of the curriculum.

However, there is a need for systematic evaluation on the parts of the listening programme in order to gather data to sustain its feasibility as an evidence-based practice for language learners.

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[6]At the beginning of the course entitled Lengua Extranjera y su Didáctica, students are administered a questionnaire on their expectations from the course and the teacher and their personal needs regarding the English language. This is complemented by a self-evaluation according to CEFR levels and skills. Results show that students are much more confident in reading and writing than in listening and speaking and that their average level is A2.

Appendix

Examples of materials provided to students:

1. **Podcasts to improve listening and/or speaking**

   – Eleven English podcasts every English learner should listen to http://www.fluentu.com/english/blog/esl-english-podcasts/
   – Five-Minute English: http://www.5minuteenglish.com/listening.htm
   – 5-Minute TOPs: Learn English with Quotes and Song Lyrics
   – BBC podcasts: http://www.bbc.co.uk/podcasts
   – British Council: http://learnenglish.britishcouncil.org/en/elementary-podcasts
   – English A+
   – English as a Second Language Podcast. Learn English Online (ESLPod)
   – English Conversations
   – English Through Stories
   – English to Go
   – ESL Lab: http://www.esl-lab.com
   – Learn conversational English for everyday use https://culips.com/
   – Podcasts in English: https://www.podcastsinenglish.com/
   – The English We Speak
   – 'Your English' Podcasts: http://www.qualitytime-esl.com/spip.php?rubrique24 (free English lessons with oral drills)

2. **Audio books**

   – Librivox: http://librivox.org
   – Best Free Audio Books Online (some of them are podcasts): http://www.learnoutloud.com/content/blog/archives/2009/04/best_free_audio.html

3. **Online exercises and MP3**

   – British Council: http://www.britishcouncil.org/learnenglish-central-listening-downloads-articles.htm
   – BBC: http://www.bbc.co.uk/worldservice/learningenglish/downloads.shtml
   – Learning English Online: http://www.englisch-hilfen.de/en/
   – Oxford Headway Online: https://elt.oup.com/student/headway/?cc=usandselLanguage=enandmode=hub
   – English grammar help and podcasts.

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Multimedia EAP Learning in Virtual Reality: Second Life in an English Department

Lan Li

Abstract E-learning has become an essential element in education today. This chapter reports the tactile experience with simulated 3D learning environments in an English department at a Hong Kong university. With the belief that multimedia instruction and multimedia learning can help learners' construction of knowledge, we used Second Life to supplement three English courses in the department. Second Life can be used for sharing knowledge, demonstrating language functions, initiating instant communication and enabling peer assessment in the learning process. Various student activities were carefully designed, such as knowledge hunting, intercultural communication, peer assessment and assimilation of workplace operation. The tasks can either be solitary individual activities or collaborative group activities. In order to determine whether the students are motivated to use Second Life and the 3D multimedia environment is more effective than a traditional classroom, different research instruments were used to obtain student feedback. The data reveals that more than half of the students regard virtual learning activities in Second Life stimulating, interesting, interactive and entertaining.

Keywords Second Life • 3D-virtual learning • Online learning • Multimedia • Learner-centred • Interaction • Collaboration • Immersion • Cultural study • Motivation

1 Introduction

Educators are in constant search for more efficient and effective ways to advance student learning. The modern language classroom has utilized various interactive tools for knowledge transfer and communication such as WebCT, Blackboard, MOODLE, the Internet and various apps, but ultimately, products are 2D and static (De Lucia et al. 2009; Burgess et al. 2010). Typically, Blackboard, WebCT and MOODLE, the most popular e-learning software platforms used by many

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universities, are merely database tools; they are not datagogies, i.e., interactive learning environments developed by and for teachers and students. By default, Blackboard, WebCT and MOODLE are closed environments, preventing students and teachers from seeing what goes on in one another's classes. These tools assume more of a chain gang mentality: Power and control lie with the programme administrators (Moxley 2008). In order to foster student rhetorical agency, technical instruction must be integrated with rhetorical analysis, medium-specific concerns and considerations of larger cultural contexts (Turnley 2005).

Virtual reality systems were originally created for use by the military, space and aviation industries to enhance simulated training. However, as the virtual reality technology becomes more affordable, more advanced and more widely available, its applications have developed in a diverse number of fields (Cobb 2005). Second Life is a web-based 3D-rich media virtual environment, the largest-ever 3D virtual world created entirely by its users. In its 14 years' service, Second Life has shown great potential for simulating real life in different sectors such as education, the arts, medicine, military, science and business, although it is not quite as sophisticated as other online community services such as Facebook or Twitter. According to the Second Life website, over 21 million people in the world today are using the platform for a variety of purposes such as sports, working solutions, task-based games, role-play and competitions. It has become a part of popular culture. Interestingly, the education community is the fastest growing and among the most vibrant, active and dynamic users of Second Life with over 700 educational institutions having set up virtual campuses, including some world's leading universities, including Oxford University, Imperial College London, University of Edinburgh, Yale University and Ohio University. Research has found that some students perform better in an online learning environment due to the comfort it provides them in participating in learning activities: 'We are hoping to discover that Second Life is an environment in which every student feels comfortable about taking part in academic discussions' (Fox et al. 2009, p.98).

The Hong Kong Polytechnic University rented three islands from the Linden Lab and built the Virtual PolyU in 2007, the first virtual campus created by a higher educational institution in Asia. Over the past seven years, a number of innovative environments have been created for distance learning, classroom teaching, professional simulations and computer-supported cooperative working opportunities for academic and non-academic partners. By the end of 2013, 11 departments had set up various 3D learning facilities on the virtual campus and the system served over 4000 student avatars. Herold (2010) summarizes the five key educational functions of Second Life: teaching, learning, assessment, designing and resources. On Virtual PolyU campus, the Virtual Hotel enables students of tourism to deal with virtual customers; nursing students can practice medicine with patients in the Virtual Hospital, and business students can hold virtual negotiations with business avatars. The virtual world enables staff and students to implement simulations in a safe environment to enhance experiential learning, practice skills, try new ideas and learn from mistakes. Students can gain a deeper level of learning, extend their professional knowledge and promote life skills for an all-round development.

The Virtual PolyU English Department was designed as a 'Tree of Knowledge' with five floors in the tree trunk: The first and second floors are lecture halls and the third and fourth are exhibition halls for displaying student learning products and conducting peer assessments. The ground floor is the Drama Lab, which is currently under construction. There is also a Roof Garden for holding conferences and other activities. Theoretically, the tree could be developed on an even bigger scale, with different branches for different subjects or functions; the development possibilities are endless within Second Life, limited really only by resources (Li et al. 2012).

2 How Can Second Life Help Learning?

As Hamid (2002) observed, 'often it is in an eagerness to embrace technology that an understanding of the fundamentals of learning and how it occurs is overlooked' (p. 311). Second Life has been used in education for quite a number of years and it seems to have become a fashion or a sign of an innovator and pioneer in e-learning. However, there are more reports on its design and application than on investigations of its effectiveness in learning. To better understand e-learning in Second Life, Mayer's cognitive theory of multimedia learning (CTML) can be of great use.

Mayer's cognitive theory of multimedia learning asserts that people build mental representations from words and pictures (Mayer 2005). The words can be spoken or written, and the pictures can be any form of graphical imagery including illustrations, photos, animation or video. The CTML is based on three principles: The human information processing system includes dual channels for visual/pictorial and auditory/verbal processing, each channel has limited capacity for processing and active learning entails carrying out a coordinated set of cognitive processes during learning (Mayer 2005, p. 31) The central idea is that learners attempt to build meaningful connections between words and pictures and that they learn more deeply than they could have with either words or pictures alone (Mayer 2009). Second Life successfully combines the two in an active mode; this may be the reason why many educational institutions have adopted it.

With the advancement of modern technology, the incorporation of multimedia products into a learning approach is endless, which includes guided discovery, worked-out examples, collaboration, self-explanation and navigation for knowledge. Second Life is practical and innovative in that it dispenses with the norms of the traditional learning system and introduces students to a multi-user immersive virtual environment (MUVE) where students can play vivid roles in simulated scenarios. In a language-learning context, Second Life combines action, speech and writing 'with the interactional and reflective aspects of language merged in a single medium' (Zeng and Takatsuka 2009, p. 434). Once inside the virtual space, students can be transported to a different world—a substitute reality in which they can interact with objects, people and environments. In one instance, students can engage in activities that improve their professional competence, e.g., critical evaluative expertise acquired through an Second Life activity. In the next instance, they can enhance

computer literacy or technical competences, develop the ability to navigate a 3D environment, assimilate different language use contexts and acquire many other skills. Students who are keen on modern technology and enjoy computer games will find the Second Life environment stimulating, interesting and attractive.

High-end virtual reality is the experience of losing oneself in the digital environment and shutting out cues from the physical world; it is known as *immersion* (Witmer and Singer 1998). The tracking and rendering process allows a much greater level of interactivity than traditional media. Unlike other media, users in a virtual environment have roles within the medium, and their actions have an immediate and observable impact on the content of the medium. According to Fox et al. (2009), virtual worlds differ from other applications in three ways. First, virtual worlds allow for real-time simultaneous interactions, whereas systems such as Facebook are generally mediated through time-delay mechanisms. Secondly, virtual worlds allow users to create fully customized self-representations, or avatars, that are far more flexible than image creations in online communities such as YouTube. Avatar activities have been investigated in extensive studies; the self is represented visually and textually through synchronous chat. Users in the immersive virtual world of Second Life tend to behave in accordance with the norms of 'real' face-to-face communication, which in turn creates what has been termed *self-presence*. Self-presence connotes a feeling of connection between oneself (the 'self' as perceived in reality) and the self as an avatar; this furnishes a great sense of connection with other avatars, which in turn facilitates the possibility of language learning and idea exchange via interaction with other avatars. Finally, the basic rules of physics apply within virtual worlds, making Second Life three dimensional and navigationally comparable. Students can travel around the world in Second Life and communicate with people from different cultural backgrounds.

Second Life is a suitable environment for creating complex multi-dimensional and multifunctional structures and embedding related pedagogical contents for training purposes and networked collaboration spaces. The aim of initial development is to create a virtual world for training that is a less expensive, less risky, less variable and possibly more effective method overall than hands-on training or traditional media. Another opportunity is through the development of virtual workplaces (Wilson and D'Cruz 2006) or collaborative virtual environments to allow interaction via avatars. Because both training and collaboration can be facilitated by a virtual environment, it is unsurprising that a great deal of research energy is going toward the development of virtual classrooms (Moreno and Mayer 2007). Digital enhancements offer unlimited opportunities for infusing the subject matter directly into the classroom. Additionally, classroom variables can be manipulated to create the optimal learning environment. For example, sitting at the front of the classroom and receiving the majority of the teacher's eye gaze both enhance student learning, but these factors are not achievable for every student in a physical classroom because of student number and limited time. In the virtual classroom, however, these factors can be manipulated so that every student receives these benefits; indeed, research has demonstrated that virtual manipulations result in better learning (Bailenson et al. 2008).

2.1 Digital Natives and Internet Behaviour

Prensky (2001) was the first to propose the concept of the *digital divide*. Made up of 'digital natives' or 'digital immigrants', the divide has massive ramifications for the development of any kind of educational digital utopia. Digital natives, i.e., those that were born after 1985 and enjoyed sufficient access to digital resources, generally demonstrate an innate affinity with such technology. Conversely, digital immigrants, having grown up in a world before the advent and widespread diffusion of the Internet, encountered digital technology later in life and generally show less affinity with this form of technology. Researchers have shown that digital native students have come to form firm expectations with regard to the inclusion of digital elements within the learning process. Digital natives, however, have a greater aversion to the adoption of such learning practices and respond more positively to passive forms of learning such as lectures (Barnes et al. 2007; Oblinger and Oblinger 2005). The status of digital native is not simply a generational, age-determined factor. Prensky (2017) argues that not only should age be considered in determining digital native status, but other more important factors should be accounted for, such as the availability of technology and breadth of use, prior experience, self-efficacy and education. Students can make conscious choices about what learning techniques work best for them. Prensky (2017) believes that modern technology and digital experience of the younger generation have brought about 'profound differences in both THE ENDS OF EDUCATION and the PARADIGM WE USE TO EDUCATE' (p. 2). In the past, students learn knowledge at school and become useful to the society when they become adults. Nowadays students improve the world while they are learning. 'They are now empowered to accomplish in very useful ways at far younger ages, allowing us to recombine thinking and accomplishing into a new kind of education—one with direct, hands-on connection to the world and its problems' (Prensky 2017, p. 3). Second Life can provide a problem-solving platform for this type of new learning.

Perhaps success in Second Life is closely related to users' internet behaviours; high self-efficacy and optimism have been found to significantly influence success in a variety of information tasks (Nahl 2005, p. 1). Nahl (2005) outlines three types of Internet behaviour: affective behaviour, cohesive behaviour and interactive behaviour. Affective behaviour refers to the emotion students put into activities. Cohesive behaviour refers to social sharing, that is, the ways in which students talk to one another and share their views. Interactive behaviour mostly concerns how students express their agreements and disagreements, how they use social media, how they invite people and how they make enquiries. Notably, when people believe they are interacting with an avatar, their physiological responses and behaviours are more similar to how they would interact with a real person (Okita et al. 2008). All these behaviours are realized by the use of language; therefore keeping student writings, either their reflective essays or their online chats, can be useful resources for understanding students' online behaviour and knowledge retention.

3 Examples of Second Life Learning

With the belief that multimedia instruction and multimedia learning help the learner's construction of knowledge (Mayer 2005, p. 2), we applied Second Life to supplement three English courses in the department: Language, Culture and Communication; English for Technical and Web-based Writing; and Drama and Language Teaching. Various student activities, such as knowledge hunting, intercultural communication, peer assessment and assimilation of workplace tasks, were carefully designed to train different skills of the learners.

3.1 Social Skill Training

Salmon's (2005) five-stage model establishes a sequence for learning in online communication: access and motivation, online socialization, information exchange, knowledge construction and development. Each stage develops skills that are prerequisites for the following stages and supports a specific range of activities. Each stage also requires particular technical and teaching support. The preparatory stage includes the initial steps required to get students to access the site where the learning is to take place and to master the basic technical skills required by the platform. These steps include logging on as avatar, changing appearance, teleporting to a target place, using landmarks stored in the inventory and recovering from a crash. In this stage, students are focused on learning the skills to engage with the environment itself and are not concerned with curriculum content. Acquisition of the skills of motion, manoeuvring, wayfinding and using mouselook can get them prepared for the next stage: online socialisation.

Salmon's (2005) online socialization stage includes using local chat and manoeuvring skills to apply proxemics. These skills are important to acquire early on, since the sense of co-presence with other users in a virtual environment is the element attractive to most participants and is essentially advantageous over other online resources. 'Collaborative learning' begins to take place at the information-exchange and knowledge-development stage. It represents a significant shift away from the typical teacher-centred to lecture-centred dynamic domain in college classrooms. Derived from the Harvard model of 'teaching for understanding', learning is conceived as a performance whereby the learner applies learning in new contexts, thus increasing competence (Craft et al. 2007). This radically transforms the role of the teacher, who becomes one of the designers of intellectual experiences, as instructors increasingly become coaches of a more emergent learning process (Smith and MacGregor 1992).

As with many other educational technologies, Second Life can only be used as a supplement for teaching, not a replacement of the mainstream. Until virtual learning becomes a compulsory part of any given syllabus, it will remain within the teacher's

Fig. 1 Interactive globe in the virtual English Department

discretion to decide which elements of the course can be embedded into the virtual learning exercise. Our practice in three separate subjects will be discussed below:

Language, Culture and Communication is an introductory course, compulsory to Year One BA students. It covers a wide range of topics on language and culture with the aim of encouraging students to explore world cultures themselves and share their experiences and reflections with their peers. The objectives of this subject are (1) to introduce to students the nature and characteristics of language, culture and communication studies; (2) to cultivate students' creativity, critical thinking and problem-solving abilities through research, data collection and verification and (3) to develop students' global outlook. We designed a task for students to have a virtual trip around the world in Second Life: They talk to different people, understand different cultures and collect evidence that English is a global lingua franca. The aims of the task are (1) to understand the role of English in the world, (2) to find cultural differences in each place and (3) to develop skills in communicating with strangers.

To achieve these aims, the student avatars 'physically' choose a number of cities on the model globe in the virtual English Department (see Fig. 1), which can teleport them directly to their target city in the virtual world. There they can communicate in English with other avatars they meet, be that in London, Paris or Timbuktu. Rather than looking at limited pictures or watching restricted movies, students in Second Life are able to fly around the virtual globe to immerse themselves in places such as cinemas in New York, theatres in London and cafes in Paris and discuss any topics with the avatars they encounter in different simulations. This multimedia

learning process constitutes a broad category of verbal, acoustic and graphic devices ranging from local cues to global content representations. Research has proved that the principal use of cues and representations improves learners' comprehension and memory for knowledge (Rouet and Potelle 2005, p. 297). This travel functionality allows students to enjoy the international nature of the Second Life platform. We also invited a virtual lecturer to run a webinar on World English, providing students with an academic context to the exercise in which they were engaged. The sheer amount of supplementary materials and exercises posted in the virtual English Department allows students to gain deeper knowledge and to explore different topics in great depth.

The Second Life activities in this subject take four teaching hours per semester, and the rest is done in students' spare time. One of the assignments is an e-travelogue that is also posted to the Blackboard system for knowledge sharing and collaborative learning among co-students. Some students claimed that the journey into the cyberspace is a magic learning experience.

4   Collaborative Skill Training

English for Technical and Web-based Writing is a task-based course with the aim of enhancing student linguistic competence, computer competence and teamwork skills. The assignments are user guides, posters, invitation cards or book covers produced with desktop publishing software. The motivation to include this subject on the virtual campus was to take advantage of the mechanism of interactive peer assessment of student coursework. Given the student-centred nature of outcome-based education, learners are heavily involved in the assessment as a part of their learning process. Haas et al. (2002) described a web-based project of sharing knowledge through a 'studio review'—a move from the traditional exchanging of physical hardcopies of papers in a classroom between teacher and student to a system of virtual commentary and sharing of works in progress in the multimodal virtual classroom.

Before the peer review exercise, a technician set up the display of all the students' assignments in different classes in the virtual exhibition hall. Also, a 3-h training session was conducted to familiarize students with the virtual environment. When the peer assessment started, the student avatars first walked around to see all the works by their classmates. They then worked in pairs, commented on each other's work and wrote reviews on the notecard attached to each board. The review is open to the whole class, and other avatars can also add comments. In a 2D environment, such a batch of files on a computer has to be opened and viewed one by one; shifting between documents can be time consuming and boring. In the virtual exhibition area, all the assignments are posted on boards, which allow the avatars to make comparisons easily and give comments directly (see Fig. 2). Researchers have found that written comments can be more effective than providing grades (Hattie and Timperley 2007; Black and William 1998). Furthermore, comments from peers can indicate students' understanding of the learning outcomes and their ability to

Fig. 2 Commenting on peer work by student avatars

articulate their opinion. In this manner, the community of learning distributes power more evenly, providing more democratic means for authorship and ownership of ideas and leading to construction of common-based peer-to-peer interfaces that engage the wisdom of the crowds (Moxley 2008).

Though the peer review was not a part of assessment, the student avatars proved to be very enthusiastic in advising peers on possible ways of improving their work. The peer comments were automatically collected and saved by the system for teachers' review.

4.1 Subject Knowledge Training

Drama and Language Teaching is a postgraduate course with about 40 Chinese-speaking English teachers or ESL postgraduate students participating each year. Most students are full-time teachers studying on a part-time basis. In this course, students learn how drama motivates and facilitates second-language learning, and explore different drama techniques, activities and practice. The learning outcome is to understand what is required to create, direct and produce dramatic productions.

An understanding of theatre is essential in drama study. Obviously it is highly impractical to lead a group of 40 students to visit a real theatre several times a year. Even if such an opportunity presented itself, the majority of attendees would not get the chance to ask questions to important personnel, such as a theatre manager. The immersive virtual theatres in Second Life help remedy this problem by granting public access to theatre environments and providing students with the opportunity

to interact with theatre staff who are willing to talk to keen avatars. In a 2-h drama class, students created their representative avatars and mastered basic movements in the Second Life space. The course work requires the students to complete the following tasks:

- Spend 10 h in Second Life to visit five or six virtual theatres.
- Observe technical factors such as costume, light, sound set and other special effects.
- Talk to virtual theatre managers or other visitors.
- Comment on how the venues/stages enable interactive performance capabilities.
- Find out what Second Life avatars can do there and how effective it is and why.
- Apply standard theatre review categories to compare the theatres.
- Write a review in about 500 words comparing the virtual drama venues as a language learning activity and reflect on your virtual visits.

The most popular virtual theatres the students visited were (1) The Rose Theatre owned by Angel Manor; (2) Theatre on the Hill, directed by Zane Littlething; (3) Pure Luxury; (4) The Second Life Shakespeare Company and (5) The Second Life Globe Theatre. The Second Life Globe Theatre was created by THEATRON, a project sponsored by the British government through which 20 theatres were built that represent different cultures and different eras of theatre. Virtual theatres are usually characterised by the same basic elements we observe in our physical environment: ground, sky, building, streets and other components of external landscapes; the floors, ceilings, seats, lights and walls of internal spaces; and both realistic and fantastic objects. The activities in these theatres were particularly designed for pedagogical purposes, including live shows, opera, classical music, film, movie scenes, jazz concerts, Victorian vintage costume displays, musicals and Pantomimes. Some theatres are highly interactive and can allow students to play with the sound, costumes and settings (Fig. 3).

While visiting the virtual theatres, student avatars were encouraged to talk to theatre managers or other visitors to gain some subject knowledge. Communication skills and question skills are of great importance. To encourage collaborative learning in the class, the students were requested to attach their chat logs with other avatars in the virtual theatre. The chat log can also record the time and frequency of a student's visits to the Second Life. This Second Life course work was embedded in the syllabus, accounting for 20% of the total assignment.

5   Feedback on Second Life Practice

Mennecke et al. (2008) believe that virtual worlds offer researchers a unique opportunity to study how these environments are built and managed by operators; how they are used and misused by users; and the impact that they have on users, communities, organizations and societies at large. To obtain the feedback on Second

Fig. 3 A visit to Rose Theater by a student avatar

Life learning from the students and teachers, we employed a series of evaluative instruments: a questionnaire survey, a focus group discussion, staff interviews and student reflective essays to address the following questions:

1. What is the motivation of students in using this new technology in learning?
2. How effectively can Second Life supplement the subject learning?
3. How can the Second Life environment promote collaborative learning?

   Two sets of data will be analysed in this paper: a student questionnaire and a corpus of student reflective essays.

5.1 Findings from the Questionnaire Survey

A questionnaire survey was conducted among 128 students to obtain learners' opinions on using Second Life. Students indicated on a five-point Likert scale the degree to which they agreed with the statements. Some aspects missing in the reflective essay were added, such as motivation (S4), comparison with 2D environment (S3), extra effort to visit more virtual places (S2) and the physical navigation experience (S8). The overall view on Second Life is on the positive side with mean scores of all the statements above 2.5, as shown in Table 1.

   The highest agreement is with Statement 2 'I have visited other Second Life sites to know more about theatre study', showing that students were interested in Second Life and made extra effort to visit other virtual sites in addition to the theatres. S3, which indicates Second Life interest, ranks second. The students affirm that the 3D learning environment is more interesting than 2D Internet materials. The immersive interactions with other avatars in chat rooms and the visits to virtual theatres help

Table 1 Average student responses in the questionnaire

Statement	Mean	SD
1. Using Second Life helps me in learning the subject.	3.04	1.26
2. I have visited other Second Life sites to know more about theatre study.	3.50	1.17
3. It is more interesting to investigate a 3D theatre than texts or 2D pictures.	3.21	1.13
4. I am motivated to learn play design through visiting virtual theatres.	3.07	1.36
5. Virtual visits can help me to understand the theatre structure.	3	1.41
6. Chat-room exchanges help in learning the subject.	3	1.19
7. Second Life is useful for learning a second language.	2.68	1.47
8. I have no problem navigating in Second Life.	2.68	1.09

them to learn the subject. The difference of standard deviation of S7 indicates that there are very different views on the usefulness of Second Life in language learning. The effectiveness of using Second Life is dependent on students' experience within the virtual environment, and since not everyone likes this, it can strongly polarize opinions. Forty-two percent of students agreed or strongly agreed with S5, that using Second Life can help learning about the theatre, and 39% disagreed with it.

A pronouncedly different story emerges when we cut the data by age. The younger students turned out to be more positive toward Second Life than the older students. This is not surprising because it reflects the characteristics of digital natives, who were born after 1985 and have grown up with the Internet. They are far more likely to engage if we include electronic/digital information resources and use information communications technologies to enhance the learning experience across all areas, including curriculum delivery, learning resources and assessment practices (Palfrey and Gasser 2010) (Fig. 4).

Figure 4 reveals that in all measures there was a greater propensity to positively evaluate the Second Life exercise; the 18-25 age group had the highest rates of positive feedback to the questions. Seventy-one percent agreed with the statement, 'Second Life is useful for learning a second language'. The non-digital natives had the consistently low opinions on Second Life activities. This may well be a demographic effect, in which younger respondents have grown up in a digitally pervasive world. It should be noted, however, that these results were from a sample of only 28 students, so they are indicative rather than definitive.
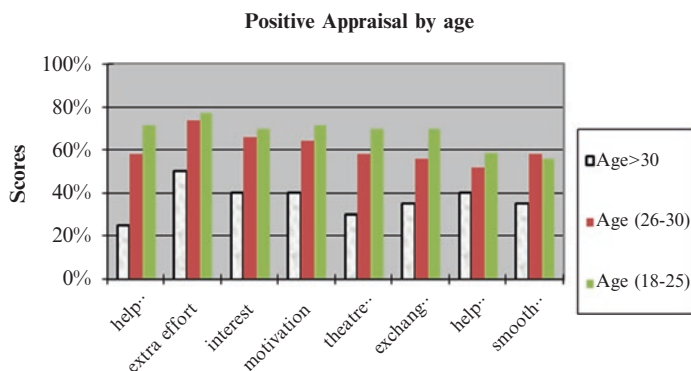
Fig. 4 Opinions by age group

5.2 Findings from the Reflective Essays

The second data is a 26,000-word corpus of reflective essays written by 40 master's degree students. The data was analysed quantitatively and qualitatively using WordSmithTools 5.0 (Scott 2008) and WMatrix (Rayson 2008). WordSmith is a PC-based concordancer that enables researchers to generate statistics, wordlists, concordance lines and keyness. Wmatrix is an online software package for semantic analysis with which we can group words used by students into different semantic fields, such as words indicating emotion, evaluation and entertainment.

Corpus analysis generated a lexical profile students used to describe their Second Life experience. The word frequency list and the concordance analysis revealed positive and negative attitudes towards the Second Life. Some students reported that the multimedia virtual learning environment could make drama learning more like real stage activities, and its graphics and animations can be used to make the context more engaging, vivid or personally relevant for the learner. In the student reflective essays, the students' lexical choices, the words one chooses to make meaningful utterance, which can indicate the ideological standpoint from which an author is writing, included 304 emotion and attitude words, such as *fun, enjoy*, *interesting*, *nervous* and *frustration*, taking up 1.2% of the total words. Table 2 shows the top 15 content words in the corpus.

The top 15 words in each word class can generally reflect students' opinions on Second Life activities. In the top adjectives group, strong positive words include *good*, *important*, *true*, *new*, *beautiful* and *interesting*. The concordance lines can further reveal how attitudinal words are used to express student opinion. We searched the word *feel* and its inflections. Of its 41 occurrences in the corpus, 12 co-exist with positive words such as *comfortable*, *excited*, *free*, *interested*, *happy*, *joy* and *sense of achievement*. As expected, negative feelings were also expressed using the words *difficult*, *angry*, *frustrated*, *isolated*, *nasty*, *nervous*, *unsafe* and *uncomfortable.* The reasons can be found from the concordance lines; we can also work out the reasons for the resulting difference in feelings: Comfort was due to the

Table 2 Top 15 nouns, verbs and adjectives in the student reflection corpus

Nouns	Frequency	%	Adjectives	Frequency	%	Verbs	Frequency	%
Character	118	0.44	Real	96	0.36	Act	147	0.54
Drama	101	0.37	Different	65	0.24	Like	126	0.47
Experience	102	0.38	New	34	0.13	Use	95	0.36
Language	100	0.36	Virtual	34	0.13	Talk	77	0.29
Role	94	0.35	Good	35	0.16	Think	74	0.28
Actor	90	0.34	Able	20	0.07	Play	69	0.26
People	88	0.33	Same	20	0.07	Feel	69	0.25
Time	83	0.31	Important	19	0.07	Know	61	0.22
Way	70	0.26	Beautiful	16	0.06	Find	57	0.2
World	69	0.26	Facial	16	0.06	Chat	50	0.18
Avatar	67	0.25	Old	16	0.06	Help	45	0.16
Performance	59	0.23	Social	15	0.06	Express	40	0.13
English	55	0.2	Young	17	0.06	Say	40	0.14
Girl	48	0.17	Physical	14	0.05	Understand	35	0.12
Conversation	44	0.16	True	13	0.05	Debate	32	0.14
Group	40	0.15	Interesting	12	0.05	Communicate	30	0.11

Table 3 Left collocates of the word *experience*

Positive collocates	Negative collocates	Neutral collocates
Amazing, learning, interesting, new, real, valuable, enriching, fun	Bad	Personal, life, debate, acting, performing, teamwork, Second Life, night, own, my

freedom from face-to-face communication, interest was aroused by something different from traditional teaching and excitement came from grand theatres the students had never seen before. By contrast, nervousness and difficulty were from communicating with strangers; frustration was caused by computers breaking down and the uncontrollability of avatars; and anxiety occurred when one was left alone on an isolated island, feeling helpless.

Although the data size is small, the collocations clearly show uniformity in student attitude towards Second Life. Take the word *experience*, for example. It has 102 occurrences in the corpus whose collocates are mostly attitudinal, as shown in Table 3. Only one negative collocate with *experience* is found in the corpus.

Another word worth attention is *confidence*, which can indicate judgement on self-esteem capacity and normality. Various forms of *confidence* occur in the corpus; the most popular being *self-confidence*, for example: 'I become (a) **self-confidence** to express my opinions; Self-confidence is very **important**; with self-confidence, we can act (b) more **naturally** and **easily**'. Despite some grammatical errors, as in *become self-confidence*, the reflection is more natural than normal with a positive attitude.

The corpus analysis indicates that students are generally positive with the immersive experience in Second Life theatres and the self-presentation as an avatar. More appreciation or reaction-impact can be illustrated by the following quotes from their reflective essays:

- S1: It is **wonderful** and **unforgettable** experiences for me participate in Second Life.
- S2: Since I feel **interested** in this experience, I am **willing** to talk more.
- S3: Second life looks like a big family where I feel **free** to communicate.
- S4: It [Second Life] is a **positive** environment that makes us immerse in English.
- S5: You feel **comfortable** because you do not need to talk face to face.

There were some negative opinions on the Second Life activities, mostly on technical frustrations and difficulties in finding another avatar to talk to.

- S5: When I first tried to open my account, it was quite **frustrating**. It took me around 45 mins to get registered.
- S6: Flying over oceans made me feel **isolated** and **deserted** with little help.

The following is a light-hearted but rather poignant example of identifying oneself with the virtual self. A young male student chose a female avatar and his female avatar M was subsequently turned down by another avatar. He wrote:

> My natural feelings and **empathy** for the character X apparently flooded. I was **terribly hurt** although I was aware that it was just in a virtual world and M is only my avatar. It seems that I have assumed her point of view at that moment. Until now, I cannot forget that experience. I think the reason is that I was in M and she was also in me.

The evaluation, negative or positive, reveal that there is close connection between the virtual self and the self in a regular everyday sense.

Compared with the reflections in the essays, the questionnaire reveals slightly more negative attitudes. There were 14% more disagreements than agreements with the Statement 7, 'Second Life is useful for learning a second language'. And only about 20% of the students regarded themselves as smooth Second Life navigators, while the majority had problems moving in the Second Life environment. This is similar to the results in the previous reports the author has published (Li et al. 2012). As Stoll (1995) noticed, 'scepticism and criticism of new technologies in mass communication and computer science is not new' (p. 9).

6   Summary

Second Life, with rich multimedia learning objects used in conjunction with a constructivist pedagogy, has undoubted potential for experiential learning, knowledge construction, creativity training and collaboration. That said, at this point it may not be the panacea educationists would have one believe. One challenge is how we can prove that multimedia helps tackle a range of students' acute learning problems. Another challenge is that Second Life requires a great deal of resources, from the design of the interface and learning activities to the actual administration of the virtual entity. Furthermore, the results would indicate potential demographic problems with regard to engagement: Mature students are less appreciative of or motivated in virtual worlds as a learning methodology than younger students. The realizations of Second Life in classrooms may also be challenged by server size. In our study, when more than 10 students logged on to Second Life at the same time, the Internet speed continued to be a problem, which was reflected in student feedback. In recent classroom practice, making individual tasks into group work made full engagement in Second Life interactive activities possible.

With the trend in learning moving from absorption to immersion, Second Life is a potentially irreplaceable tool for teachers who will increasingly have to keep abreast of such technological developments. Open around the clock, the Second Life platform allows students the flexibility to complete assignments and participate in exercises according to their own schedule and learning pace. The connectivity available through the platform affords students the opportunity to engage in meaningful forms that can in turn facilitate deeper learning and ultimately increase their linguistic confidence.

7 Implications

In the process of preparing this paper, a newer technology has been introduced into the education arena: augmented reality (AR). Different from Second Life, which replaces the real world with a simulation, AR is dedicated to integrating the computer-generated virtual scene seamlessly into the real environment, adding real life to cyberspace. This can allow students to better observe the real world and enhance their perception of their actual working environment, such as a theatre or a workplace. With properly designed learning tasks, AR technology may have wider and more effective uses in active language learning. Challenges to educationists are pedagogical rather than technical.

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Part III
English for Occupational Purposes

The final part of this volume, consisting of four chapters, is focused on ESP. Pedro A. Fuertes-Olivera starts situating the concept of ESP within the Spanish university context, which is characterised by the existence of diversity. This means that instructors must re-adapt the absolute and variable characteristics of ESP to the Spanish teaching and learning environment. One possible way to adapt is to instruct learners in the use of free online dictionaries, which are especially useful for gaining knowledge; within this framework, he illustrates a way to do this. This implementation has allowed him to propose the use of collaborative dictionaries, for example, Wikipedia and/or well-conceived specialised dictionaries for assisting ESP learners to gain knowledge in areas such as business and economics.

In relation to the boom in medical tourism over the last years, even in times of economic recession, there is a new and productive labour market for both translators and interpreters. According to Encarnación Postigo-Pinazo and Concepción Mira-Rueda, the Costa del Sol (which is located in the south of Spain) is one of the main medical tourism spots due to its mild temperatures throughout the year, the quality of its health system and its value for money compared to other countries of the European Union. In particular, the province Málaga has been considered a holiday health destination since the 19th century. In view of this situation, they focus their research on the specific field of medicine and the competences of scientific writers, medical translators and interpreters.

Lidia Taillefer's chapter reconsiders the design of business English courses in the digital era, taking into account previous experience both of classroom-based and online learning. After experiencing the traditional educational problems and new technological advantages and surveying students and teachers, she recommends following an integrated approach to develop a course adapted to the needs and preferences of current learners. A blended methodology is the best option based on her analyses of all the fundamental aspects for ESP curriculum development. As a lack of speakers with whom to practice makes oral skills the hardest areas to tackle, she suggests using online resources, activities and tools.

In the last chapter of our book, Leah Leone shows that training translators online provides students with the professional advantage of learning within the environment in which they will eventually work. Informed by the practice of backward course design, she starts by conducting a needs analysis, then outlines effective uses of the virtual platform and closes with a number of suggested technology-based translation activities.

ESP and Free Online Dictionaries

Pedro A. Fuertes-Olivera

Abstract This chapter situates the concept of ESP within the Spanish university context, which is characterised by diversity. This means that ESP instructors must re-adapt the absolute and variable characteristics of ESP to the Spanish teaching and learning environment. A possible way to do this is to instruct learners in the use of free online dictionaries, which are information tools that are accessible through the Internet with or without paying a fee. These tools are especially adequate for gaining knowledge, such as the concepts and conceptual framework scaffolding a domain. Within this framework, this chapter illustrates a way to use using free online dictionaries for gaining knowledge. This consists of two stages: first, the use of a template that includes 10 characteristics for deciding on the adequacy of the dictionaries to be used and, second, the recommendation of two specific types of dictionaries for gaining knowledge. The implementation of both stages allowed me to propose the use of collaborative dictionaries, such as Wikipedia and/or specialised dictionaries, to assist ESP learners to gain knowledge of specific domains.

Keywords Diversity • Adaptation • Free online dictionaries • Adequacy • Two specific types of dictionaries • Collaborative dictionaries • Wikipedia • Specialised dictionaries • Business • Economics

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1 Introduction

Since its inception in the mid-1960s, the concept of English for specific purposes (ESP) has referred to the teaching and/or learning of the English language in ways that meet specified learners' needs. Dudley-Evans and St. John (1998) enumerate the characteristics of ESP that are accepted in the majority of the ESP community:

   I. Absolute Characteristics
– ESP is defined to meet specific needs of the learner;
– ESP makes use of the underlying methodology and activities of the discipline it serves;
– ESP is centred on the language (grammar, lexis, register), skills, discourse and genres appropriate to these activities.

II. Variable Characteristics
– ESP may be related to or designed for specific disciplines;
– ESP may use, in specific teaching situations, a different methodology from that of general English;
– ESP is likely to be designed for adult learners, either at a tertiary level institution or in a professional work situation. It could, however, be for learners at secondary school level;
– ESP is generally designed for intermediate or advanced students;
– Most ESP courses assume some basic knowledge of the language system, but it can be used with beginners. (pp. 4–5)

Within the above-mentioned general framework, researchers are currently concerned with several issues, three of which are relevant for this chapter: (a) the discursive construction of genres, for instance, Hafner's (2013) description of a problematic situation involving the process of the transition novice professional writers experience when they move from school to professional practice; (b) the influence of cultural components, e.g., Zhang's (2013) analysis of a study on the different reaction posed by international business practitioners receiving business letters and (c) the use of multimedia for teaching and learning specialised vocabularies, for example, Rusanganwa's (2013) investigation of the integration of information and communication technologies in undergraduate physics students' teaching of English technical vocabulary.

This chapter follows along these same lines and will focus on the use of online dictionaries for assisting ESP learners to upgrade their knowledge of a particular ESP domain, in this case, business and economics. This objective needs some clarification. The first is that the concept of *dictionary* is used to refer to any reference work that has been designed for punctual consultation. This means that *dictionary* is used in this chapter as an umbrella term that refers to glossaries, dictionaries, terminological knowledge bases, term banks, lexica etc. The second clarification is concerned with the concept of *knowledge*, which is different from *skills*. Knowledge refers to the concepts underlying a particular domain. Upgrading a learner's knowl-

edge is necessary for working with ESP texts, e.g., the technical texts used in different ESP courses.

ESP courses are usually one of three groups or types (Carver 1983, pp. 132–133): (a) English as a restricted language, for instance, the language of air traffic controllers; (b) English for academic and occupational purposes, broken down into two sub-types: English for academic purposes (EAP) and English for occupational purposes (EOP), respectively, for example, English for business and economics and (c) English with specific topics, e.g., English for attending conferences and symposia. To the best of my knowledge, only Type b courses are part of the normal teaching curriculum of colleges and universities: English with specific topics and English as a restricted language are situational language courses, in other words, types of vocational courses that are only offered once specific needs are identified. Gatehouse (2001) partly concurs with this view:

> This type of ESP [Type c] is uniquely concerned with anticipated future English needs of, for example, scientists requiring English for postgraduate reading studies, attending conferences or working in foreign institutions. However, I argue that this is not a separate type of ESP. Rather it is an integral component of ESP courses or programs which focus on situational language. This situational language has been determined based on the interpretation of results from needs analysis of authentic language used in target workplace settings. (Heading: Types of ESP: Last paragraph)

Vocational courses are different from regular courses in many ways. For the purpose of this chapter, I will only mention that learners enrolled in these courses need different types of reference works. For instance, learners enrolled in Type a courses typically need dictionary data for recipients. This means that a reference work such as the *Glossary for Pilots and Air Traffic Services Personnel* (Transport Canada 2009) is excellent, as it contains only the data needed in the situations where it will be used, which are the only possible situations in which pilots are placed when the air controller contacts them (Fig. 1):

alternate aerodrome

An aerodrome to which an aircraft may proceed when it becomes either impossible or inadvisable to proceed to or land at the aerodrome of intended landing. Alternate aerodromes include the following:

(a)   **take-off alternate aerodrome**
(b)   **en-route alternate aerodrome**
(c)   **destination alternate aerodrome**

Note: The aerodrome from which a flight departs may also be an en-route or a destination alternate aerodrome for that flight.

Fr: aérodrome de dégagement

Fig. 1 Dictionary entry in the *Glossary for Pilots and Air Traffic Services Personnel* (Transport Canada 2009)

Example 1 shows a brief definition of the term and its French equivalent (because of Canada's language policy), as the pilot and the air traffic controller only need a clear and easy-to-understand description of the situation communicated, i.e., an exact meaning of the term describing the situation: They must limit the possibility of misunderstanding to a minimum. This is what they have in the above glossary, and therefore the glossary is excellent for performing the recipient function (Fuertes-Olivera and Tarp 2014; Tarp 2008, 2010a) (Fig. 1).

In English for academic and occupational courses, the use situation is different and more complex, as it is also concerned with producing, translating and upgrading (or acquiring) knowledge. This chapter will explain the teaching and learning situation in Spanish universities (Sect. 2) and then discuss two different theoretical frameworks for approaching the use of reference works in such situations (Sect. 3). Section 4 will apply one of the approaches discussed above to some free online dictionaries that could be used in the framework described in Sect. 2. A final conclusion summarises the main points discussed and offers ideas for future research.

2 EAP and EOP Teaching and Learning in Spanish Universities

English for academic and occupation purposes refers to the English language needed for immediate use in a study environment, i.e., English for academic purposes (EAP), or for use later in a job, i.e., English for occupational purposes (EOP). This distinction is based on the means used for achieving an end and not on the end itself (Gatehouse 2001). In other words, both sub-types are so closely related that it is easy to find ESP courses that contain skills that are needed in both EAP and EOP environments, e.g., *reference skills* are needed when a student is still in the university, e.g., for submitting assignments, and in many job environments, e.g., when preparing market research for launching a new product. I think that this is the situation that typically occurs in Spanish universities; therefore, I will not differentiate between the two sub-types in the following.

Recent research, (e.g., Fuertes-Olivera and Arribas-Baño 2008), has refined the category of *semi-expert* initially described in Bergenholtz and Kaufmann (1997), and has defended the concept of three subtypes of semi-experts in the teaching and learning environment associated with ESP courses taught and learnt in Spanish universities: (a) semi-experts from other related fields, (b) students from unrelated disciplines, and (c) translators and interpreters. For instance, business English courses in Spanish universities are usually open to students from different majors; therefore, some students have a broader knowledge of business and economics discourse than others. To sum up, the main characteristic of potential ESP learners in Spanish universities is that they are heterogeneous, which puts into doubt the adequacy of one absolute characteristic, i.e., that ESP aims to meet specific needs of learners, and two variable characteristics, i.e., that ESP is designed for specific disciplines and is

used in specific teaching situations. In other words, the adjective *specific* merits a reinterpretation within the teaching/learning environment of Spanish universities.

In my view, the word *specific* in the ESP teaching/learning environments at Spanish universities has two implications. The first is that we need to re-evaluate the role that some internal and external factors play. This means a deep analysis of the following questions is needed:

1. What is the role of instructors (i.e., teachers) inside and outside the classroom? For instance, is team-teaching (i.e., a course taught by an expert in the subject field and English teacher) possible and economically viable?
2. Must instructors have a working knowledge of the domain they are teaching? Or how can instructors have a working knowledge of the different domains their students belong to?
3. How should a needs analysis be carried out and which needs must be addressed primarily? Or do instructors perform the same needs analysis for students belonging to different domains?
4. Which teaching materials must be used? Must they always be authentic material? If so, authentic for whom?

The second implication relates to some recent findings on basic characteristics of Spanish learners and on the nature of specialised vocabulary. Fuertes-Olivera and Gómez Martínez (2004) have found that thinking in L1 and reading are correlated. This means that the more students read in English, the less they think in Spanish. They have also found that although factors such as attendance and homework are judged positively by students, they tend to pay them little or no attention at all. These results are consistent with the Spanish university framework, where students do not regularly attend lectures and/or tutorials, and English instructors have to struggle with inappropriate conceptions of L2 within Spanish society. Finally, they have also found that the principles and practices associated with communicative methods are sometimes absent from Spanish teaching tradition. For example, in some nurseries children are taught written words and numbers (for instance, irregular verbs) instead of spoken functional expressions and formulae. These findings indicate that ESP instructors have to devote some time to be sure that their students correctly understand and accept the daily routines of communicative methodologies, which assumes that ESP learners have no special lexicographical training nor have been explained which dictionary type is more adequate for solving their specific needs. Among these daily routines of communicative methodologies, the use of pedagogically oriented online dictionaries is highlighted in this chapter.

Fuertes-Olivera and Piqué-Noguera (2013) and Fuertes-Olivera and Tarp (2014) have also found that around 70% of the word stock currently used in specialised domains, such as accounting, consists of multi-word terms, i.e., terms composed of three or more orthographic words. Table 1 shows English terms that include the word *method,* distributed by number of orthographic words.

To the best of my knowledge, the above finding has not merited much attention so far. Recent works on teaching specialised vocabulary, e.g., corpus studies such as Gavioli (2005) and Gajšt (2013), have focused on terms composed of one or two

Table 1 Terms formed using the word *method* in the English-Spanish accounting dictionaries.

Orthographic words	Number	%
One-word terms	0	0
Two-word terms	33	28.7
Three-word terms	51	44.3
Four-word terms	26	22.6
Five-word terms	1	0.8
Six-word terms	2	1.6
7-word terms	2	1.6
Total	115	100

orthographic words. In other words, they have left out of their analysis around 70% of the word stock of many domains. What makes these multi-word terms really interesting is that they are coined for restricting meaning, i.e., both their language profile and conceptual meaning is specific and has to be learnt on an individual basis (Fuertes-Olivera and Tarp 2014).

Taken together, the above-mentioned two implications indicate that the word *specific* may have an idiosyncratic interpretation, i.e., a meaning that is acceptable within the Spanish university context. Within this context, I believe that *specific* must refer to courses prepared for teaching learners that have a stated and precise purpose, which is, firstly, to learn to communicate in English, and, secondly, to learn to differentiate the nuances of meaning that are associated with restricted situations, i.e., the specific meaning of multi-word terms. In practical terms, this means that the design of ESP curricula in Spanish universities must cater to general needs, i.e., needs that all possible ESP learners have, typically social English; partially special needs, i.e., needs that may be partially restricted, typically to learn to read faster or to learn the jargon of the trade; and all-purpose specific needs, i.e., needs that all learners will have sooner or later, e.g., to learn to deliver a talk. This means that I am proposing a syllabus that may need more teaching hours than the one usually accorded to ESP courses in Spanish universities (most courses have 6 ECTS (European credit transfer system)).

A possible solution to overcome time constraints is to understand (and apply) the impact of multimedia on learning. Mackey and Ho (2010, p. 387), for instance, cite research by Baruque and Melo (2004), Deubel (2003) and Mayer (2001) on the influence of behaviourist, constructionist and cognitive approaches that aim to understand the impact of multimedia on learning. Behaviourism explains that learning is a change in behaviour due to experience and the function of building associations between the stimulus event and the response event. Constructivism argues that learning 'is constructed by the complex interaction among students' existing knowledge, the social context, and the problem to be solved'. (Baruque and Melo 2004, p. 346) Finally, cognitivism asserts that learners gain a deeper level of understanding through the associations made between words and images in an integrated environment (Mayer 2001).

Below, I will defend the use of free online dictionaries in the Spanish environment described so far. In particular, I will focus on ways for using free online dictionaries with the aim of meeting one all-purpose specific need, which is that all learners enrolled in a specific ESP course must have a sound understanding of the facts, i.e., concepts, of a particular domain. This could be achieved assuming the following: (i) Reference works are tools, i.e., they are prepared to satisfy potential needs in potential use situations, as claimed by proponents of the function theory of lexicography (Sect. 3, below) and (ii) the Internet must be handled with care, as we must avoid the many dangers associated with the uncritical use of the Internet, e.g., the so-called Google effect, which is the suffocation effects users receive when they retrieve much more data than needed (Sect. 4).

3   Dictionaries as Tools

Fuertes-Olivera (2012) and Fuertes-Olivera and Tarp (2014) describe two basic orientations in the *Kingdom of Lexicography*. One of them is illustrated with postulates that basically stem from the eighteenth century, e.g., Johnson's *Dictionary of the English Language* (1755). These postulates claim that making dictionaries is a craft or art (Landau 2001) without theoretical support (Atkins and Rundell 2008). This craft or art must be based on a proper understanding of the linguistic characteristics of language, i.e., lexicographers have to design and produce dictionaries under the tenets of linguistics, e.g., corpus linguistics (Sinclair 1991), or cognitive linguistics, e.g., frame-based semantics (Fillmore and Atkins 1992). Within this orientation, dictionaries are only concerned with describing the vocabulary stock of a language, using the tenets of linguistics for this endeavour. Within the realm of ESP, this orientation is very popular, for example, in the *Cambridge Business English Dictionary*:

> The *Cambridge Business English Dictionary* is a brand new dictionary of over 35,000 business-related words, phrases and meanings used in business and the world of work.
>
> Including the most up-to-date vocabulary from the rapidly evolving world of business and business English, the *Cambridge Business English Dictionary* is ideal for anyone studying business-related subjects and for anyone using English for their work.
>
> The dictionary gives thousands of examples from real business texts, helpfully presented information about grammar, and there is a strong emphasis on collocation.
>
> Informed by the unique Cambridge Business Corpus, the dictionary includes the very latest business-specific vocabulary.
>
> Most of the words in the dictionary have a business subject label, such as **Marketing**, **Finance**, or **Computing**…. (Homepage. See at http://dictionary.cambridge.org/dictionaries/business-english/)

The second approach is furnished by the tenets of the function theory of lexicography, which is the academic construction originally initiated in the Centre for

Lexicography at the University of Aarhus (Bergenholtz and Tarp 2002, 2003, 2004; Tarp 2008), which has since been subjected to continuous evolution. Fuertes-Olivera and Tarp (2014), for example, explain that lexicography is a millenarian cultural practice (almost 4000 years old) and an independent academic discipline with its own system of scientific theories. Being independent does not mean that it has been placed in a walled room away from the rest of the scientific disciplines into which human knowledge has been parcelled; instead, lexicography has relations with many other disciplines, e.g., specialised lexicography has relations with information science, linguistics, terminology and specific subject fields (Fuertes-Olivera 2018). This idea translates into the construction of dictionaries as tools and dictionaries that target specific needs in potential use situations. Regarding ESP, these needs arise in communicative situations, such as needs related to translating, reading or writing English texts, and/or cognitive situations, such as needs related to understanding concepts or the language characteristics of the subject field in question (see Fuertes-Olivera and Tarp 2014; for a discussion, see also Tarp 2010b, 2012).

The second approach defends the construction of dictionaries that are different from the above-mentioned *Cambridge Business English Dictionary*. For instance, we have constructed dictionaries that have dynamic dictionary articles with dynamic data, in other words, dictionaries that adjust the data displayed in the dictionary homepage to the requested usage situation. A case in point is the *Diccionario Inglés-Español de Contabilidad*, which displays data adjusted to four prototypical use situations. For instance, a Spanish translator of English accounting texts can search in the *Diccionario Inglés-Español de Contabilidad: Traducción* (Fuertes-Olivera et al. 2012c) or the *Diccionario Inglés-Español de Contabilidad: Traducción de Frases y Expresiones* (Fuertes-Olivera et al. 2012a). The first dictionary offers a Spanish and English definition of the English lemma, a Spanish equivalent with number and gender inflections, and several English collocations and examples that have been translated into Spanish. The same user can search in the second dictionary and retrieve all the phrases, i.e., collocations and examples (see Fuertes-Olivera et al. 2012b for a discussion of the concept of collocation in lexicography) in the dictionary article in which they are found, each described with definitions, examples, contextual clues etc. In other words, the first dictionary is typically used by novice translators whereas the second is much used by experienced translators.

To sum up, ESP learners have two main types of information tools at their disposal. One type follows a linguistics approach to dictionary making and is mostly concerned with dictionaries that target all-purpose specific needs rather than specific needs. The second type follows a lexicographic approach, which results in dictionaries that take into consideration the three key elements of any information tool: user needs, data types adjusted to meet user needs and access routes. In other words, this second approach is based on the main tenets of the function theory of lexicography, which posits that the core of lexicography is the design of utility tools that can be quickly and easily consulted with a view to meeting punctual information needs occurring for specific types of users in specific types of extra-lexicographic situations.

Most existing free online dictionaries are examples of linguistics-based dictionaries (Fuertes-Olivera 2012). Because they have not been designed and compiled

for meeting specific needs, their users must perform a process of conversion in order to use them with confidence. Below I offer a template for making existing free online dictionaries adequate pedagogical tools in cognitive situations, such as for gaining business knowledge.

4 Free Online Dictionaries for Gaining Business Knowledge

Pedagogical dictionaries refer to dictionaries conceived in order to assist native and foreign language learning as well as knowledge learning (Fuertes-Olivera 2010; Fuertes-Olivera and Arribas-Baño 2008; Tarp 2005, 2008). Research on their use in a teaching/learning environment has produced surprising results. Al-Ajmi (2008), for example, has found that

> the provision of examples along with definitions negatively affects students' ability to understand unfamiliar English words. This finding clearly contradicts the common belief that examples are useful in both comprehension and production. It should, nevertheless, lead dictionary makers to think seriously about solutions to problems of constructing examples and definitions. (p. 22)

Al-Ajmi's findings need confirmation, something that has not been achieved so far. A possible explanation for Al-Ajmi's findings is that learners are not very skilful in using dictionaries. Lew and Galas (2008), for instance, have claimed that in spite of the various calls for including training in dictionary use in school and academic curricula, no large-scale teaching of dictionary skills has ensued, and current research into the effectiveness of training in dictionary use is lacking in convincing results. In my view, this training must have two stages.

The first stage is to explain to learners a theoretical model for analysing dictionaries. For instance, the functional approach to dictionary reviewing proposed by Fuertes-Olivera and Tarp (2014, pp. 130–134) can be an adequate initial step for evaluating dictionaries for ESP learners. This approach is a template of ten criteria, which are summarised below:

1. Author's view: Does the dictionary include outer texts that inform on relevant lexicographic characteristics, e.g., the targeted user(s), and expected use situations that the dictionary aims to cover? Similarly, have the compilers of the dictionary discussed the main characteristics of the dictionary in the lexicographic literature? With these questions, we emphasise how important the authors' opinion is for building a theory of lexicography and its translation into real and working dictionaries.
2. Function(s): Does an independent analysis of the dictionary match the information given in outer texts and lexicographic literature on the function(s) the dictionary aims to cover? In other words, do the data presented in the dictionary support the function(s) identified? The focus is on whether the data match the needs of the target group(s).

3. Access routes: Does the dictionary contain access routes that favour the process of consultation? Focus is on whether the data are presented so that users can process them to get the information they need to solve their problems in a simple and easy way.
4. Internet technologies: Is the dictionary using existing Internet technologies? If the answer is yes, is it using them adequately? The focus is on whether the dictionary offers options that favour consultation, for instance, dynamic articles with dynamic data.
5. Lexicography: Does the dictionary make use of lexicographical theories and methodologies or is it based on other type of theories, e.g., cognitive linguistics as mentioned above?
6. Production costs: Are lexicographers using time and money in a sensible way? For instance, why do some dictionaries, for example, many EU-funded projects, use so much funding when its results can be achieved with less funding?
7. Information costs: Are lexicographers paying attention to the amount of time and effort users may need to look up, understand and interpret their findings? For instance, why do some dictionaries force users to search two or more times to retrieve data? In other words, are lexicographers paying attention to the distinction between comprehension- and search-related information costs discussed in the literature (Nielsen 2008)?
8. Updating: Is the dictionary being updated regularly, which is a must in specialised lexicography?
9. Experts: Are real experts in the field included in the production team of the dictionary? This is necessary in specialised lexicography to increase the quality of the data included, as we believe that other methods of extracting specialised knowledge, e.g., non-experts working with corpus data, cannot be used for compiling most dictionary articles.
10. Data selection: Does the dictionary use reliable sources for selecting and treating the lexicographic data included in the dictionary article? This criterion aims to assess the reliabilism of both the raw material included and its lexicographical treatment. The focus is on considering whether or not the data included and its lexicographic treatment are the result of a process that is documented and knowledge based, i.e., that the data have been validated by experts. To sum up, investigating the reliability of the data selected and its lexicographic treatment is necessary and can be accomplished by, say, performing several random analyses of the data included and treated in the dictionaries reviewed.

This template will inform users about several needed issues. For instance, free online dictionaries such as the *Glossary of Mortgage and Home Equity Terms* (2012) are not recommended. They are basically promotional tools designed by organisations and/or companies—private or public, national or supranational etc.—with the aim of explaining the meaning of the terms they are using to refer to the basic characteristics of these organisations' products and/or services. In other words, the genuine purpose of this *Glossary* is the description of the mortgage contracts of the company designing such a tool (Fig. 2).

Balloon Mortgage
A mortgage that has level monthly payments that would fully amortize over a stated term, but which provides for a lump-sum payment to be due at the end of an earlier specified term.

Balloon Payment
A lump-sum payment due at the end of an earlier specified loan term with level monthly payments.

Bankruptcy
A proceeding in a federal court in which a debtor who owes more than his or her assets, can discharge personal liability for his or her debts. This may affect a borrower's personal liability for a mortgage debt but not the lien of the mortgage.

Biweekly Mortgage
A mortgage with payments due every two weeks, totalling 26 payments a year.

Fig. 2 Dictionary articles from the *Glossary of Mortgage and Home Equity Terms*

In terms of the above functional framework, this dictionary does not describe its characteristics nor does it take into consideration lexicographical theories. It stands out because it signals a trend in today's world, in which technology is no longer self-explanatory. Instead, technology

> needs instructions, leaflets for describing the product, the installation procedures etc. In sum, modern terminology needs improving communication strategies. Communication between developer and user can only work if the text author and the text recipient share the same terminology, i.e., if a given term denotes exactly the same concept for author and reader. Language, and primarily written language, is the prerequisite for our modern technology. (Teubert 2005, p. 98)

The second stage is to explain to learners the specific characteristics of the free online dictionaries selected in the initial stage. In other words, this stage is mostly concerned with giving information about which dictionary articles they need in order to gain business knowledge such as facts and concepts that explain the conceptual characteristics of a domain. For instance, in the above-mentioned Spanish framework, gaining business knowledge is crucial, as many ESP courses are taught to students with different knowledge backgrounds. Having some knowledge of the subject field is necessary, for example, to write an ESP text.

At this stage, learners need dictionaries that provide information about key concepts and facts. There are three basic types of online dictionaries that users can consult to gain knowledge: (a) dictionary portals, (b) collaborative dictionaries and (c) well-conceived cognitive-oriented dictionaries.

Encyclopedia.com is a dictionary portal, i.e., 'a data structure that is presented as a page or set of interlinked pages on a computer screen and provides access to a set of electronic dictionaries, and where these dictionaries can also be consulted as standalone products' (Engelberg and Müller-Spitzer 2013, p. 1023). These authors also differentiate between several types of dictionary portals, with *Encyclopedia.com* being an example of a 'dictionary search engine', i.e., a system that provides outer and external access to dictionaries that do not exhibit interdictionary cross-referencing and whose search results are not presented uniformily. This system is

not recommended, as it does not target learners; instead, it aggregates data and hence forces learners to disambiguate by themselves, which is problematic and difficult to achieve, as learners are not prepared to decide for themselves at this stage. In other words, dictionary search engines suffocate learners and will hamper their learning process. For instance, I searched the word *motivation* and retrieved several dictionary articles in several reference works, most of which contain around 6000 words, which is much more than ESP learners need and can easily understand.

Wikipedia is an example of a collaborative dictionary or collective free multiple-language Internet dictionary (Fuertes-Olivera 2009). Dictionaries such as *Wikipedia* can be used with confidence. Since the launch of *Wikipedia* in 2001, researchers have conducted several well-known comparisons of different encyclopaedias, typically *Britannica* and *Wikipedia*, with the stated goals of analyzing their degree of accuracy and deciding whether *Wikipedia* is a reliable source of information. This type of research starts by assuming that the *Britannica* should be regarded the most scholarly of the encyclopaedias, and therefore as a kind of yardstick against which new encyclopaedias have to be compared.

Research into *Wikipedia* as a reliable source of information offers mixed results. On the one hand, its editorial and authorship processes have been criticized. Santana and Wood (2009), for example, claim that in both systems there is a lack of transparency, and they argue that this 'jeopardizes the validity of the information being produced by Wikipedia' (p. 133). Criticism of *Wikipedia* has also reached the academic world. Gorman (2007) claims that *Wikipedia* is an 'unethical resource unworthy of our respect' (p. 274), and Lim and Kwon (2010, p. 213) indicate that some universities no not allow their students to cite *Wikipedia* in their assignments.

On the other hand, the few studies that have been conducted on the accuracy of *Wikipedia* paint a different story. For example, in 2005 the science journal *Nature* conducted a wide-ranging comparison of *Wikipedia* and *Britannica*'s level of accuracy in dealing with 50 scientific topics, concluding that the overall error ratio was 4:3 in *Britannica*'s favour; this less than overwhelming margin gained notoriety when *Nature* rejected the rebuttal sent by *Britannica*, describing *Nature*'s study as flawed and misleading. In a similar veil, Fuertes-Olivera (2013) has offered convincing results on his analysis of these two information tools. Fuertes-Olivera focused on the amount of conceptual data included in both reference works and found that they contained similar data, although organised in a different way, with *Wikipedia* using Internet technologies more consistently. For instance, the article for the word *motivation* contains a well-conceived table of contents and several hyperlinks that allow users to click on the required data, thus making *Wikipedia* adequate for gaining knowledge quickly and easily.

The *Dictionary of Business and Management* (Law 2012) is an example of a well-conceived specialised dictionary. This dictionary targets students and business professionals and offers them long and well-crafted definitions of business and management concepts. The definition of the word *motivation* (Fig. 3) is well suited for ESP learners, as this is what they really need when they are enrolled in an ESP course:

Motivation

The mental processes that arouse, sustain, and direct human behaviour. Motivation may stem from processes taking place within an individual (**intrinsic motivation**) or from the impact of factors acting on the individual from outside (**extrinsic motivation**); in most cases these two influences are continually interacting. The vocabulary associated with motivation is large; such terms as purpose, desire, need, goal, preference, perception, attitude, recognition, achievement, and incentive are commonly used. Many of these drives can act on an individual simultaneously, causing varying degrees of conflict. A consumer deciding between buying chocolate and buying ice cream is in conflict. An employer who wants to disagree with the boss but also wants to keep his or her job is in conflict. In a business context, an understanding of business motivation is crucial to understanding consumer buying behaviour. It is also vital to the design of organizational norms and structures, including reward structures that encourage effort and achievement on the part of employees. In the realm of theory, considerable importance has been given to the hierarchy of needs investigated by Abraham Maslow (1908-70); see **Maslow's motivational hierarchy**), which places the basic needs of human survival at the bottom of the scale of human motivation and **self-actualization** at the top. The more flexible ERG theory focuses on three groups of needs that form a hierarchy: existence needs (physical and material wants), relatedness needs (the desire for interpersonal relationships), and growth needs (desires to be creative and productive). Although most psychologists now believe that human needs and motives are too variable to be confined to a fixed hierarchy, these theories have the merit of emphasizing that, besides goals, ambitions, and rewards, there is a need for success to be recognized by others and a need to develop and progress. A person in an organization never works in a vacuum; there can be a real conflict between different motivations that relate to the organization: Would I be worse paid working elsewhere? But would I be more secure/better trained/more appreciated elsewhere?

Fig. 3 The entry for the word *motivation* in the *Dictionary of Business and Management* (Law 2012)

In terms of the above functional framework, the *Dictionary of Business and Management* seems to be based on lexicographical practices, makes use of experts, is updated, and assists any user who is in a cognitive situation and wishes to gain some quick knowledge about business and management. The data matches and supports the function identified and is adequate for the intended users and for the intended purpose of offering quick information about a specific subject field.

To sum up, this section has offered some clues on the use of online dictionaries for gaining business knowledge. I have been aiming to show what Gasparetti et al. (2009) have explained: that the principal advantages of web-based systems are to be seen in the opportunity to overcome restrictions such as a dearth of teaching resources, organise complex and tailored courses for single learners and evaluate their acquired knowledge levels more or less easily. Within the framework of Spanish universities, web-based systems such as free online dictionaries are adequate tools and merit use in the teaching and learning environment associated with ESP in Spain.

5 Conclusion

The concept of ESP, which was initially described in the 1960s, is being adapted to the conditions of the twenty-first century, especially with the coming of age of the Internet. This chapter has commented on some general characteristics of ESP courses in Spanish universities, which are characterised by the fact that Spanish ESP learners are very heterogeneous. This runs against the true nature of the concept of ESP, which has assumed that all ESP learners have similar language and conceptual levels. In other words, within the context of Spanish universities, ESP learners may be very different in two key aspects of ESP. The first is that the students enrolled in a particular ESP course may have very different conceptual backgrounds, e.g., we can have students from medicine and chemistry enrolled in a business English course. The second aspect is that students with very different English levels and teaching traditions can be enrolled in the same ESP course.

A possible way of dealing with the above teaching and learning environment is to focus on the pedagogical characteristics of specialised dictionaries, e.g., the dictionaries that can be used by Spanish students of business English. Following this idea, this chapter has posited that the Internet can offer ESP instructors and learners means for overcoming the difficulties posed by having learners with different conceptual backgrounds and English levels. Hence, this chapter has shown that we need some system for evaluating whether web-based systems can be adapted and used in a teaching and learning environment that is characterized by rapid changes and lack of focus.

Within this framework, this chapter has shown that the function theory of lexicography offers the theoretical foundation and practical application to evaluate the adequacy of free online dictionaries in meeting some of the needs observed in Spanish ESP learners. In particular, this chapter has presented a method involving two stages for ESP learners to overcome the difficulties they may have in acquiring (or upgrading) knowledge of the ESP they are studying: The first stage is the description of a template that contains ten features that can be used for guiding instructors and learners when they may need to upgrade their dictionary culture. The second stage enumerates a list of three types of dictionaries that could be used for gaining knowledge. The chapter elaborates how both collaborative and well-conceived free online dictionaries can be used for this task and that ESP learners must only spend their money acquiring well-conceived dictionaries, e.g., dictionaries that are updated regularly and result from the joint work of lexicographers, experts in the field and information science specialists.

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Translation, Virtual Environments and ICT Tools for Achieving Competence in Language for Specific Purposes

Encarnación Postigo-Pinazo and Concepción Mira-Rueda

Abstract The boom in medical tourism over the last few years, even in times of economic recession, is creating a new and productive labour market for both translators and interpreters. In the south of Spain, the Costa del Sol, located in Andalusia, is one of the main medical tourism spots due to its mild temperatures throughout the year, the quality of its health system and its value for money compared to health systems in other countries of the European Union. In the particular case of Málaga, the province has been considered a holiday health destination since the nineteenth century (García Verdugo Pinceladas históricas del turismo de salud en Andalucía. In: A. Güeto, P. Pinazo (eds) Turismo y salud: traducción, interpretación y comunicación intercultural en el sector turístico europeo, pp 81–94, 2013) to the present day. In view of this situation, our main aim is to analyse the usefulness of the translation processes for achieving the full competence of languages for specific purposes. We focus our research in the specific field of medicine and the competences of scientific writers, medical translators and interpreters.

Keywords Medical translation • English-Spanish • Competence • Tourism • Parallel texts • Pathologies • Scientific writing • Virtual training environment • Peer review • Constructivist approach

1 Introduction

The Spanish health care system is ranked number seven in the world by the World Health Organisation (WHO). Figures from the WTO show that Europeans, mainly English, German and French, are the most frequent visitors to Spain. The INE (Instituto Nacional de Estadística 2013) table below shows that visits by international tourists have been increasing year by year (Table 1).

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Table 1 Arrival of international tourists in millions

Ranking of 2012	2010	2011	2012	Var % 12/11
World	949	995	1035	4.0%
1. France	77.6	81.6	83.0	1.8%
2. U.S.A.	60.0	62.7	67.0	6.8%
3. China	55.7	57.6	57.7	0.3%
4. Spain	52.7	56.2	57.7	2.7%
5. Italy	43.6	46.1	46.4	0.5%
6. Turkey	31.4	34.7	35.7	3.0%
7. Germany	26.9	28.4	30.4	7.3%
8. U.K.	28.3	29.3	29.3	−0.1%
9. Russia	20.3	22.7	25.7	

Tourism is one of the largest industries in the world. According to Scowsill, President of the World Travel and Tourism Council (WTTC 2012a, b), the total impact of the tourism industry in 2011 shows that it contributed 9% of global GDP (Gross Domestic Product), which was over US$6 trillion and 255 million jobs. Moreover, he also believes that this industry will grow by an average of 4% annually over the next 10 years.

In the case of medical tourism, the European Travel Commission (ETC) and the World Tourism Organisation maintain that both 'health and medical tourism is an emerging, global complex and quickly changing phenomenon that needs to be understood better in order to be able to make the most from the possibilities and avoid the threats' (UNWTO 2012).

Some of the factors that have given rise to medical tourism are those related to the world's aging population and health and wellness awareness, as supported by the ETC Corporate (2006), which states: 'The aging population and an increasing concern for health are likely to drive a growth in demand for health tourism products and spa services'. It also adds that 'demand for well-being, health and fitness and stress-management products is growing in the developed economies'. To better understand why developed countries practise this type of tourism—taking into account that they have a good health system—we need to analyse what medical tourism is. According to Horowitz et al. (2007):

> In medical tourism, citizens of highly developed nations bypass services offered in their own communities and travel to less developed areas of the world for medical care. Medical tourism is fundamentally different from the traditional model of international medical travel where patients generally journey from less developed nations to major medical centres in highly developed countries for medical treatment that is unavailable in their own communities. (p. 1)

Along these lines, Spain has become one of the popular medical destinations for tourists. There are several reasons why tourists visit Spain: 'a world-class health system, prices below the European average and temperatures above it' (Rincón 2013, p. 15). According to the *International Medical Travel Journal* (IMTJ 2013a, b), '58 million tourists went to Spain in 2012'; medical tourism is the perfect chance for Spain to boost its economy. In this regard, *IMTJ* (2013a, b) also added

that 'in 2012, 21,868 international visitors went to Spain for various health treatments, spending in total EUR 12.1 million'. This suggests an increasing trend. Moreover, Turespaña (also called Tourspain) opined that '9 million Europeans are health tourists each year and by 2020 this could double' *(IMTJ* 2013a, b).

To conclude, one of the main decisive reasons for translators and interpreters to work in this area is that 'medical tourism is worth around 75 billion euros worldwide' (*El País* 2013, p. 40). This indicator shows that despite the economic recession, this type of tourism has opened up a world of possibilities for translators and interpreters.

2 Training for Communication in Healthcare Tourism

English is currently considered to be the universal language for both science and medicine. In most scientific and medical conferences and journals, authors are asked to submit in English. In addition, journals with higher impact factors such as those which are part of Thomson Reuters' *Journal Citation Reports* (*JCR*) or *ISI Web of Knowledge* publish only English papers. According to Thomson Reuters (2012), 'Journals published in non-English languages or using non-Roman alphabets may be less accessible to researchers worldwide, which can influence their citation patterns. This should be taken into account in any comparative journal citation analysis'.

Indeed, authors who decide to submit their papers to journals that are published in languages other than English are asked to add an abstract and some keywords in English. For this reason, scientists and health professionals all over the world need to use English accurately. However, time pressure and tight deadlines can cause enormous difficulties for health professionals. In Spain, becoming a doctor requires many years of studying (at least 6 years to get a degree) and 1 year of preparation for the national competition procedure called Médico Interno Residente (MIR). Once candidates have passed it, they need to apply for an internship program in a hospital (it takes at least 10 years to become hospital permanent staff); when they complete this, they are fully qualified specialists in their chosen field. So the time it takes to become a doctor in Spain is more than 12 years. During the training and practice periods, students and doctors must learn and use English for specific purposes. In addition, although they acquire some proficiency in English, many health professionals might need the support of language professionals, i.e., translators and interpreters. Further on, we will see that scientific writing is not the only reason for the increasing demand of medical translators and interpreters.

In order to prepare our students for the current labour market—now that medical tourism has boomed in Spain—we will focus on the most common diseases among tourists and most required treatments among visitors. According to Ricart Gabriel (2012, p. 15), tourists come to Spain to continue with their treatments or to repeat a surgery because of a previous failed one. She also explained that the most common health problems treated range from oncology to orthopaedic surgery and neurosurgery. But before we start, we need to know what medical texts are. These types of

texts are considered specialised texts, because, according to Źrałka (2007, pp. 75–76), their main features are the following:

- Layout (text division, content and formulas),
- Vocabulary (terminology and morphological features of typical vocabulary),
- Grammar (typical grammatical structures and syntax) and
- Register (stylistic features: vocabulary and grammatical constructions used, communication strategies etc.).

With regard to text typologies, if we follow the classification that Zaro Vera and Truman (1999, p. 58) suggested, we can assume that medical texts belong to the last (11th) content area, science and technology, in the classification they proposed: 'the language used in scientific and technological texts is highly specialised, and specific in particular to these disciplines. Its lexis—and the concepts described by it—reflect its highly specialised nature' (p. 58). In our case, the terminology and the topic of our texts will be specialised in the field of medicine, specifically in common illnesses such as lupus or knee and eye surgery that northern European residents travel to Spain to receive treatment for. Along the same lines, García Izquierdo (2009, p. 53) states that in informative texts that are specialised in medicine, we can find general vocabulary (specific to the cultural community group in question), pseudo-equivalent paraphrases of terms, terms that have metaphorical definitions and others. These types of words can sometimes lead to increasing the level of the comprehension tasks, while at other times these types of texts do not follow the systematisation pattern that characterises specialised texts.

3   Skills and Strategies for Medical Translation

Translators who specialise in medical translation need to develop a specific *translation competence*. Throughout history, translation has been the focus of several definitions. In fact, Sokolovsky (2010, p. 286) proposes a classification of definitions where translation is a process and a result of this process, communication or skill. We will focus on the last type of translation definition, in which translation is a skill. Along the same lines, Newmark (1988), who believed that 'translation is a craft or skill', maintains that

> the skill element is the ability to follow or deviate from the appropriate natural usage: pragmatic and persuasive in vocative texts, neat in informative texts, hugging the style of the original in expressive and authoritative texts—you have to distinguish 'right' from odd usage, to gauge degrees of acceptability within a context. (p. 190)

In this sense, Hurtado Albir (2011) defines the translation skill as 'the skill that enables translators to affect the required cognitive operations in order to develop the translation process' (p. 12). The author also adds that 'it is the skill that identifies the translator and distinguishes them from non-translators' (p. 12). Navarro (2010) points out that a medical translator must have a deep knowledge of medicine or

related sciences and translation skills: 'The one thing that is clear to me is that medical translations should be done by medical translators only, and that is not so nowadays'. As Montant and González Davies (2007) state, there are many different people involved in medical communication. They suggest that

> for practical and pedagogical purposes, attention may be focussed on five readers' profiles: general readers, patients, students, health professionals, and researchers. These five profiles correspond to different degrees of specialisations and, therefore, of complexity for the translator. Although they all read for practical reasons (all are functional readers), each of them wants the information for different reasons and uses it in different ways. (p. 52)

Therefore, our training of future translators and editors of medical texts should be comprehensive so that they can master all skills and applications of information for the target users. As Montant and González Davies (2007, p. 53) explain, the general reader will need the information to prevent a disease; the patient to treat a disease; students to become health professionals; health professionals to implement their knowledge and, finally, researchers to further their knowledge.

4   Medical Translation Training

In fact, this paper is mainly aimed at those 'good translators genuinely interested in medicine' (Lee-Jahnke 2005, p. 62). We agree with this author that a good translator is one who masters the techniques of translation, research and documentation and, obviously, one who will produce a better translation. In response to the question 'Are doctors the only people who can do medical translations?' Jammal (1999) has suggested:

> Non et, de toute évidence, ce n'est pas le cas. En effet, rares sont les médecins qui consentent à troquer leur stéthoscope contre la plume et le dictionnaire. Et s'ils le faisaient, il leur faudrait, en sus, apprendre à éviter les nombreux pièges que comporte l'opération traduisante (interférences entre langue de départ et langue d'arrivée, difficultés syntaxiques inhérentes aux différences structurelles des deux langues etc.) (p. 218)

Both authors emphasise the need to develop translation skills. However, translators of specialised texts have other needs to fulfil and skills to develop as Hurtado Albir (2011, p. 61) *apud* Gamero (1998) summarised this as follows (Table 2):

Table 2　Skills needed by translators (Albir 2012, p. 61)

Characteristics of textual functions	Translators: required skills	
Importance of the specialised field	Subject knowledge	Information skill
Specific terminology	Terminology knowledge	
Characteristic genres	Characteristic genres knowledge	

Fischbach's (1968, p. 10) remarks on the skills that a technical translator must combine show three main features that still remain essential in recent training programs. Translators:

(a) must have a fairly extensive knowledge of, and be able to reason in, the subject matter of the translation.
(b) must be able to read the language they are translating well enough so that they can grasp the intended meaning of the author.
(c) must be able to embody that meaning lucidly and straightforwardly in the target language.

5   Using Parallel Texts for Contrastive Analysis: The Case of Orthopaedic Knee Replacement Surgery

In this section, we will present a practical case involving medical texts, a subtype of specialised texts; in this case it will involve orthopaedic knee replacement texts, one of the most common types of surgery and treatment for which people visit Spain for medical tourism. We have used several parallel texts in English and Spanish. This is a common didactic strategy to use with groups of students in their earliest stages of learning.

Working with parallel texts allows translators to enhance the experience of translating. In our case, we also believe that translation is a way to learn and to improve the students' knowledge, culture and the level of the languages that we speak, translate and interpret (Table 3).

Next, we suggest the steps that should be followed in the translation of a specialised text (medical, in this case) in order to make the most of that experience:

(a) Reading:

Lee-Jahnke suggests that translators need to do at least four readings before even starting to translate the text (2005, p. 81):

- First reading: Macrostructure of the text.
- Second reading: Unknown terms and collocations.
- Third reading: Microstructure of the text.
- Fourth reading: Quality control of the final translation.

(b) Grammar:

With the help of parallel or similar texts, students can contrast both the English and Spanish use in medical language and find the main differences in the use of verb tenses, sentence structures etc.

One outstanding feature is the use of passive voice, more prominent in English than in Spanish:

Table 3 Parallel texts on rheumatology

Reumatología Clínica 2013; 9(5):326	*Reumatología Clínica* 2013; 9(5):326
Due to the aging of the population, there is an increase of patients undergoing joint replacement surgery. Stable and lasting fixation of the prosthesis depends, among other factors, on the surgical technique used, the characteristics of the implant surface that contacts the bone and bone quantity and quality in the patient. One of the most common complications is the displacement of the prosthesis, especially in patients with osteoporosis.	Debido al envejecimiento de la población, existe un incremento de pacientes sometidos a cirugía de remplazo articular. La fijación estable y duradera de las prótesis depende, entre otros factores, de la técnica quirúrgica empleada, de las características de la superficie del implante que contacta con el hueso y de la cantidad y la calidad ósea del paciente. Una de las complicaciones más frecuentes es la movilización de las prótesis, especialmente en pacientes con osteoporosis.
It is therefore expected that therapies directed at improving bone microarchitecture and increasing bone mass facilitate osteointegration of the prosthesis.	Es, por tanto, esperable que tratamientos dirigidos a mejorar la microarquitectura del hueso y a incrementar la masa ósea faciliten la osteointegración de las prótesis.
Strontium ranelate, used to prevent osteoporotic fractures, has been shown effective in improving prosthesis osteointegration in animals. However, to date there are no studies assessing its effects in humans for this same purpose. Thus, the case presented here provides data suggesting that strontium ranelate can be beneficial for osteointegration of a hip prosthesis. The substantial improvement in symptoms just 2 months after treatment onset with normalization of bone scan at 6 months is promising and suggests its potential application in orthopedic surgery.	El ranelato de estroncio, utilizado para prevenir fracturas osteoporóticas, se ha mostrado eficaz para mejorar la osteointegración de prótesis en animales. Sin embargo, no se conocen hasta la fecha estudios que evalúen sus efectos en humanos para esta misma finalidad. Por tanto, el caso aquí presentado aporta datos que sugieren que el ranelato de estroncio puede resultar benéfico para la osteointegración en una prótesis de cadera. La mejoría sustancial de los síntomas apenas 2 meses de haber iniciado el tratamiento junto a la normalización de la gammagrafía ósea a los 6 meses resultan prometedores y sugieren su potencial aplicación en cirugía ortopédica.

The atypical presentation may lead to a delay in diagnosis and appropriate treatment. L. monocytogenes should be included in the differential diagnosis of patients with SLE with neurological manifestations.

On the contrary, in Spanish, the active voice is more common:

La presentación atípica puede conducir a un retraso en el diagnóstico y el tratamiento adecuado. L. monocytogenes debe incluirse en el diagnóstico diferencial del paciente con LES y manifestaciones neurológicas.

The following extracts will be useful to illustrate some features in English and Spanish regarding structures, terminology, eponyms, collocations and combinations (Table 4).

This is just a brief example of how a parallel text can be a useful tool to help the student or the translator to write and to check translations since they provide quality scientific writing evidence for structures such as the use of passive and active voice: an assertion that is made/*una aseveración que se establece*; that partial conclusions have been drawn from it/*que se han sacado unas conclusiones parciales*.

Table 4 The use of passive voice in English and Spanish

Reumatología Clínica 2013; 9(2):130–131	*Reumatología Clínica* 2013; 9(2):130–131
We would like to make some comments about an assertion that has been made on the incidence of hip fractures in Spain and in which we are quoted as saying that 'the incidence of hip fractures has not diminished over the years'.	Nos gustaría efectuar ciertos comentarios acerca de una aseveración que se establece en la misma sobre la incidencia de las fracturas de cadera en España y en la que se nos cita para determinar que «la incidencia de la fractura de cadera no ha disminuido en estos años».
We appreciate the reading and consideration of our work, but we believe that partial conclusions have been drawn from it. Indeed, the incidence of hip fractures in our community, in absolute terms, has increased. However, keep in mind that the life expectancy of the population is increasing and, therefore, the age factor is very important when analyzing certain incidence data. It is necessary to adjust the rates by age, assuming, from a logical perspective, that the older the population, the greater the risk of fracture. Since age is a major risk factor in achieving these expectations in the future, the changes in the population pyramid are precisely the same as the increase in the overall number of cases. The objective of our work was to establish a relationship between the use of treatment and the incidence of hip fractures, as we had observed that the number of hip fractures was actually increasing despite the immense economic effort involved with the use of drugs for the management of osteoporosis in our community. This concern was also expressed by Dr. Aguado when she pointed out that our country is the greatest consumer of drugs for this disease. We note that in certain age groups, particularly in the 65–74 and 75–84 ranges, adjusting rates for age, the incidence of hip fractures decreased between 1994 and 2008.	Agradecemos la lectura y consideración de nuestro trabajo, pero creemos que se han sacado unas conclusiones parciales del mismo. Efectivamente la incidencia de las fracturas de cadera en nuestra comunidad, en valor absoluto, ha aumentado. No obstante, debemos tener en cuenta que la esperanza de vida de la población está aumentando y, por tanto, que el factor edad es muy importante a la hora de analizar ciertos datos de incidencia. Es necesario ajustar las tasas por la edad, asumiendo, desde una perspectiva lógica, que cuanta mayor edad tenga la población, mayor será el riesgo de sufrir una fractura, ya que la edad es uno de los principales factores expectativas en un futuro, dados los cambios en la pirámide de población, son precisamente el de riesgo en la consecución de las mismas y las aumento del número global de casos. El objetivo de nuestro trabajo era establecer una relación entre el consumo de fármacos y la incidencia de fracturas de cadera, ya que habíamos observado que el número de fracturas de cadera iba efectivamente en aumento, a pesar del gran esfuerzo económico que suponía el consumo de fármacos para el abordaje de la osteoporosis en nuestra comunidad, preocupación que también refleja la Dra. Aguado al puntualizar en su artículo que somos el país que más fármacos consumimos para esta enfermedad. Nosotros observamos que en ciertos grupos de edad, concretamente en los de 65 a 74 años y en los de 75 a 84, ajustando las tasas por edad, la incidencia de fracturas de cadera había disminuido entre los años 1994 y 2008.

(continued)

Table 4 (continued)

Reumatología Clínica 2013; 9(2):130–131	*Reumatología Clínica* 2013; 9(2):130–131
The results of the Poisson regression are statistically significant for these age groups and not for others. We could not establish a causal relationship with the use of drugs for osteoporosis because it was methodologically wrong, but, given that there has been no change in the population structure or in lifestyle in this period, and assuming that these findings may have diverse origins, we believe it plausible that treatment for osteoporosis has had an influence in reducing the appearance of these fractures.	Los resultados de la regresión de Poisson son estadísticamente significativos para esos grupos de edad y no para los otros. No pudimos establecer una relación causal con el consumo de fármacos para la osteoporosis, ya que metodológicamente era incorrecto, pero, teniendo en cuenta que no ha habido ningún cambio en la estructura poblacional ni en sus hábitos de vida en este periodo, y asumiendo que estos hallazgos pueden tener un origen diverso, creemos plausible que el tratamiento para la osteoporosis haya tenido una influencia en la reducción de la aparición de este tipo de fracturas.

Word order and collocations are very important features in scientific writing, as we can find in instances such as: when analysing certain incidence data/*a la hora de analizar ciertos datos de incidencia*.

Eponymy is often present in medical texts, and the scientific writer or translator must be aware of it. In the text, we find Poisson regression/*regresión de Poisson*, named after French mathematician Denis Poisson, which refers to a form of regression analysis used to model count data and contingency tables.

Medical terminology and collocations can also be found in parallel texts from scientific journals, and the use of these resources is reliable since they have been written by professionals and peer reviewed by experts and scientific colleagues as well.

> There are a good many technical tools available online that provide useful resources for translators and scientific writers to quickly extract equivalent terms and phrases in order to accurately write a text, such as the electronic tool AntConc, a freeware concordance programme that allows the writer to look for concordances or collocations in large texts in order to use them when writing texts in English. Table 5 shows our search for concordances for the term *prosthesis*.

Essential recommendations for medical writing are found among well-known authors such as Fischbach (1968), Goodman and Edwards (2006), Lang (2010) and Taylor (2011), who all agree principally on the concepts of clarity, completeness and economy.

Table 5 Term concordance extract using AntConc software

6 Using a Virtual Learning Environment of Specialised Knowledge for Advanced Students

In this section, we suggest a model of online activity that can be useful for learning to translate medical texts in both directions, from English to Spanish and vice versa. Our topic in this case is lupus and its comprehensive treatment. Lupus is also a common pathology in the global population, so it serves for our research purpose.

The online course is intended for graduate students in translation and interpreting, professional translators who are interested in healthcare translation, technical writers or translation students who are interested in furthering their knowledge of specialised translation, or even for healthcare professionals who are willing to learn how to accurately write texts in English within their discipline. A panel of teachers monitors and coordinates teamwork.

Guidelines are provided as shown below.

(a) Getting started with the planning process

Activity: Students talk to other classmates in order to get to know each other better, and groups of 5–7 people are created, taking into account the conditions below and being as honest as possible.

- Groups should include all genders.
- Members of a group may come from different nationalities.
- Members of a group may speak different languages.

- Members of a group may have different skills, weaknesses and strengths.

Once the groups have been organized, plan out the translation process and best approach.

All of this process should be video-recorded, because will need to be shared with classmates on the day of the oral presentation of the translation project. It should be like a live diary of this specialised translation process, where we can see how classmates were chosen and why, thoughts about the text the first time it is read, how the constraints throughout this activity were solved and what has been learned from the activity.

(b) Documentation

Activity: Work is done within groups to find all the useful documentation sources for translating an original article on lupus management. Original work that has not been translated can be found online from reliable publishing houses specialising in healthcare or can be supplied by hospitals,[1] researchers from medicine or nursing schools.

A wiki tool can be used to share all the information found with the other members of your group and the chat tool to communicate with other groups.

Students registered for the course have access to university libraries; at University of Málaga, the following online resources and many others are available:

- Journals: University of Málaga library gives electronic access to some of the most renowned international scientific journals directories, such as *ScienceDirect*, *ISI Web of Knowledge*, *ISI Web of Science*, *EBSCO HOST*, *Cambridge Journals Online*, *Taylor and Francis Journals* and *Emerald Journals*.

In addition, some other references are also available both electronically and on site:

– Scientific/medical writing references such as the International Committee of Medical Journal Editors website (http://www.icmje.org/about.html)
– Specialised volumes on medical translation such as *Medical Translation Step by Step* and *Learning by Drafting* by Montalt Resurrecció and González Davies (2007), both in conventional format or as electronic resources.

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[1]An example of a reliable original text that can be used to practice specialised translation that has no translation in English is from El Hospital Clínico in Barcelona, which includes in its website a protocol for lupus devoted to care of pregnant women: http://www.medicinafetalbarcelona.org/clinica/images/protocolos/patologia_materna_y_obstetrica/LES-y-embarazo_ICGON_def.pdf

Another good example is an article published in Spanish by *Revista de Neurología* in 2008 about lupus by J.M. Gómez-Argüelles, P. Martín-Doimeadios, F. Sebastián-De la Cruz, F.J. Romero-Ganuza, J. Rodríguez-Gómez, J. Florensa, A. Oliviero entitled 'Mielitis transversa aguda en siete pacientes con lupus eritematoso sistémico', *Rev. Neurol* 2008;47:169–174, PMID: 18,671,205. The same journal contains 11 recent articles on the same topic and only a brief abstract is written in English. This journal written in Spanish is included in MEDLINE/Medlars/Index Medicus, SciSearch/Science Citation Index, EMBASE/Excerpta Medica, Research Alert, Neuroscience Citation Index, IME/Indice Médico Español, IBECS/Indice Bibliográfico Español en Ciencias de la Salud. It is indexed in Journal Citation Report.

Table 6 Selection of resources on lupus

Spanish version	English version
1. Horta-Baas, G., Guerrero-Soto, O., Barile-Fabris, L. (2013). Infección del sistema nervioso central por Listeria monocytogenes en pacientes con lupus eritematoso sistémico: análisis de 26 casos, incluyendo el reporte de un caso nuevo. *Reumatología Clínica*, 9(6), 340-347. URL: http://0-dx.doi.org.jabega.uma.es/10.1016/j.reuma.2013.04.011	1. Horta-BBaas, G., Guerrero-Soto, O., Barile-Fabris, L. (2013). Central Nervous System Infection by Listeria monocytogenes in Patients With Systemic Lupus Erythematosus: Analysis of 26 Cases, Including the Report of a New Case. *Reumatología Clínica* (English edition), 9(6), 340-347. URL: http://0-dx.doi.org.jabega.uma.es/10.1016/j.reumae.2013.10.003
2. Aguilera-Pickens, G., and Abud-Mendoza, C. (2013). Manifestaciones neuropsiquiátricas en lupus eritematoso generalizado: bases fisiopatogénicas y terapéuticas. *Reumatología Clínica*, 9(6), 331-333. URL: http://www.reumatologiaclinica.org/es/manifestaciones-neuropsiquiatricas-lupus-eritematoso-generalizado/articulo/90250955/	2. Aguilera-Pickens, G., and Abud-Mendoza, C. (2013). Neuropsychiatric Manifestations in Systemic Lupus Erythematosus: Physiopathogenic and Therapeutic Basis. *Reumatología Clínica* (English edition), 9(6), 331-333. URL: http://www.reumatologiaclinica.org/en/manifestaciones-neuropsiquiatricas-lupus-eritematoso-generalizado/articulo/90254587/

– Terminology and jargon can be found in print and online dictionaries. For the specific case of lupus, we suggest using the parallel texts found in the website of *Reumatología Clínica* shown in Table 6. We advise students to write English versions of the Spanish texts of the following articles in particular for documentation and concordance and terminology extraction.

(c) Translation process

The following guidelines should be given to participants:

Activity: Students are the responsible for the final versions of their articles; therefore, they should consider the target readers of their texts when deciding how to translate: Either divide the text and have each member translate a portion or distribute it to all the members of the group with each member translating the full text. The advantages and disadvantages of choosing one or other of these options should be considered and the choice justified. A list of the challenges of the text and a glossary (using the Glossary module in Moodle; see Table 7) of the main technical terms should be made.

The translation should be read a few days later in order to identify potential mistakes. A wiki tool can be used for the translation, because it allows you to change and add information whenever necessary so that all members of the group can collaborate.

(d) Oral Presentation (OP)

This can be performed online on a fixed webinar with all the students' groups and teacher connected at a pre-established time.

Table 7 Glossary tool in Moodle

Courses ▶ English ▶ Exchange Samples ▶ Topic 2 ▶ Inspirational Quotations by (Chad Outten)

Chad says: "…about 70 education-related quotes (including author) in xml format. works nicely when displayed as a random glossary block on moodle site page.

Search [　　　　　　　] ☑ Search full text

Add a new entry

Browse by alphabet | Browse by category | Browse by date | Browse by Author

Browse the glossary using this index

Special | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W | X | Y | Z | ALL

Page: **1** 2 3 4 5 6 7 (Next)

ALL

A

Albert Einstein
Education is what remains after one has forgotten everything he learned in school.

Activity: Students show their final versions of their translations and what the process has been like, all of their recordings, glossaries, lists of challenges, lists of documentation of where resources were found, why they were chosen and other items.

We are following some of the principles of constructivism (Kiraly 2000) and recent studies that support this approach that generate engagement and satisfaction on the part of students (Ebrahimi 2013).

(e) Peer-review process

Activity: To simulate the common scientific processes of journals and publishing houses after oral presentations, the groups' final translations groups should be distributed anonymously using the Moodle module workshop for final assessment using the peer review method, which has shown positive results in many studies (e.g., Kao 2013). Both teachers of the panel for the course should receive a project as if they were the scientific committee of a journal. This is advisable than allowing students to do this, since teachers can assess the works as experts, and students may not be able to since they are in the first stages of this particular practice in scientific writing. The approved versions, once they have been reviewed and the changes made, should be sent to an electronic folder created to host quality work done in class on the virtual campus in order to simulate a professional working environment.[2] Trainers can even suggest choosing one of the best pieces for publication in a specialised journal.

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[2] This procedure is commonly done in translation training for professional practice so that trainees can see is as a rewarding simulation task.

This procedure can be repeated as many times as needed using different health topics and projects until the writers and translators become more skilful. The next section will analyse the results of the course.

7 Improving English Proficiency While Translating Medical Texts

Once we have designed a virtual learning environment to initiate our students into the process of specialised translation in the field of medicine from English to Spanish and vice versa, we will analyse in this section how this environment can be helpful to our students not only for learning to translate medical texts but for improving their English proficiency.

Malkjaer (1998, p. 1) mentioned that most language teachers do have not a favourable view of using translation in language teaching. In her analysis of the situation of translation as a learning strategy, she argues that translating involves competence in at least SL (source language) and TL (target language) and also the ability to relate the two systems to one another appropriately. She also argues that 'if a translation tasks is properly situated, it provides a natural focus for practice as any other classroom activity… and draws up together most of the skills normally considered essential in classroom practice' (p. 8).

There has recently been a revival of the use of translation tasks for language learning (Malmkjaer et al. 2013). Fernández Guerra (2014) finds positive attitude of students' regarding translation tasks and good results after using those tasks:

> Results show that students' attitudes [about incorporation of translation tasks] were surprisingly positive for several reasons: … It is motivating, it facilitates a deeper understanding of the form and content of the source language text, it increases learners' awareness of the differences between the two linguistic systems.' (p. 155)

Following previous research literature, we can affirm that translation is very helpful for learning English as a second language, in this case for specific purposes, since:

1. Strategies based on constructivism (Kiraly 2003), which is a predominant model used to simulate professional environments, make it possible to put into practice the four skills of learning English and
2. Translation makes it possible to learn and compare scientific English texts, structures, grammar and writing conventions through contrastive analysis strategies (Polo 2002); therefore, it contributes to enhancing students' scientific English skills.

In Spanish Universities, bachelor's degree studies in translation and interpreting allow the study of several languages. At the University of Málaga, three different languages are offered and divided into three categories:

• Language A: Spanish (which has the status of mother tongue)

- Language B: English or French (also referred to as first foreign language)
- Language C: English, French, German, Italian, Greek or Arabic.[3] (also referred to as second foreign language)

Translation and interpreting students can take two English courses (Language and Cultural Aspects)[4] in their first year and two other courses[5] in their second year. Once students have passed these four courses, they start applying their knowledge of the English language to translation of general texts and to specialised translation in different fields such as law, science and medicine. However, translation is a powerful strategy to improve second-language acquisition, and in our case students must attain a proficiency level of C2 in at least two foreign languages, with English being compulsory.

In fact, we agree with Oster (2003) that there should not be any differences between a first (Language B) or a second foreign language (Language C). She analysed the differences between a Language B and the Language C and realised that it all depended on the role of such language, i.e., if it is active, we call it Language B or first foreign language, and if it is passive, we call it Language C or second foreign language.

We agree with Campbell (2002) who considers that translation is strongly related to second language teaching being part of all the four skills of EFL. In fact, he considers translation as the fifth skill:

> I have picked out four areas where I think translation-based techniques are highly relevant, and in some cases I have provided some counter-arguments to the common objections. The four areas roughly correspond to the four levels of linguistic analysis, i.e., vocabulary, grammar, semantics and pragmatics:
>
> Translation teaching techniques for vocabulary work
> Translation and focus on form
> Translation as a semantic content delivery system
> Translation and cross-cultural pragmatics (p. 7)

Regarding the issue of how one can improve English proficiency while translating medical texts, we will analyse some of the tasks translators usually perform in order to see how those tasks help students to continue enhancing their learning and improving their level of English for specific purposes. We will focus on documentation, translation process and discussion.

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[3] Language C must be different from the one chosen as Language B, i.e., English is chosen as Language B, it cannot be chosen as Language C.

[4] Language and Culture "B" Applied to Translation and Interpreting (I) in the first semester (*Lengua y cultura "B" aplicadas a la Traducción e Interpretación (I)*) and Language and Culture "B" Applied to Translation and Interpreting (II) in the second semester (*Lengua y cultura "B" aplicadas a la Traducción e Interpretación (II)*).

[5] Language and Culture "B" Applied to Translation and Interpreting (III) in the first semester (*Lengua y cultura "B" aplicadas a la Traducción e Interpretación (III)*) and Language and Culture "B" Applied to Translation and Interpreting (IV) in the second semester (*Lengua y cultura "B" aplicadas a la Traducción e Interpretación (IV)*).

(a) Documentation

Students improve their reading skills through this activity by trying to find essential and important information in order to better know the field of specialisation of the text to be translated. Reading means understanding other writers' work, whether it consists of short messages or long texts. Before they search for the information they need, they should be able to use terminology for certain concepts in the foreign language. For this reason, students should first search for the equivalents of the most repeated words in the text and make their first searches on the Internet and in books. This is a very comprehensive activity due to the fact they will read information in a foreign language, learn new words and structures, understand and learn more about specialised texts in the given field, and analyse the sources of these texts. They will also use a foreign language with a specialised register and academic style thanks to this extensive reading of papers published in academic journals.

(b) Translation process

During this process, students use all four skills: reading, speaking, listening and writing. They need to communicate and share with their partners all the information they have found, read and understood if they want to simulate a professional working environment (Rodríguez Rodríguez, 2013). They must decide which options are best the best to use in translating their source text into the target text. The constructivist model fosters discussion among students, peer review processes and engagement in revision and editing processes in the provision of a version of the written translation. Before the assignment is fully submitted, a peer-review activity, which is also a comprehensive task, is performed in which the student assesses and corrects a text that has been produced by another person.

Therefore, students need to write their target texts taking into account the appropriate use of grammar, vocabulary and register. For this reason, translation in this case will make students work with specific terminology, analyse scientific discourse and make decisions on whether the translation will be rendered in their mother tongue or in the foreign language in which they are working, which in this case is English.

8 Discussion

Discussions involving an oral presentation of the assignment are often a regular activity in the classroom. Students are often reluctant to discuss their translated texts. This can be due to their own lack of confidence in their foreign language proficiency, their pronunciation, their intonation and their use of grammar.

However, as soon as this becomes a frequent activity, students feel more motivated to prepare their presentations more carefully before class, and it fosters student engagement in enhancing both their oral and written skills.

9   Conclusions

Language learning is a complex process that can be improved using translation tasks. Medical translation is a good example of a specific purpose learning process. In Spain, medical tourism is vital, and translators and interpreters play a key role in facilitating communication between professionals and users. Doctors also must be skilled when writing scientific texts in English. This chapter gives some guidelines for improving the writing or translating competence of scientific texts, such as the use of parallel texts and the comparison of characteristics of those texts in English and Spanish. Language technologies and ICT tools provide quick and accurate ways to extract terminology for the documentation process and render quality translations. We offer a short selection of text samples for two of the most common pathologies found in medical tourists and visitors: knee surgery and lupus. In order to train scientific writers, healthcare professionals and translators to improve their skills, we suggest an online-environment activity based on the constructivist approach (Kiraly 2000) in which several teams follow guidelines to successfully carry out a translation project.

Among these guidelines should be resources for documentation, instructions for teamwork performance and keeping a record of activities and tools to communicate with peers and give oral presentations. To simulate a professional situation, the final version of the project should undergo a peer-review process (Kao 2013) with classmates as reviewers. Students should correct their projects after the assessment and, when possible, send the translation to the authors of the original work for feedback. The best way to train translators is to perform real projects with meaningful purposes in order to better achieve quality training. All of this will improve the student's language competence in English for medicine. Translation and language-learning training can be a joint effort in effective second language training since language learning can greatly benefit from both the complex cognitive processes of translation processes and the great potential of the constantly emerging translation technology tools.

Appendix

Electronic resources
   Internet websites containing parallel texts and terminology:

http://orthoinfo.aaos.org/topic.cfm?topic=a00389
http://orthoinfo.aaos.org/topic.cfm?topic=A00485
http://www.boa.ac.uk/PI/Documents/TKR%20Patient%20Advice.pdf
http://www.hopkinsmedicine.org/healthlibrary/test_procedures/orthopaedic/
   knee_replacement_surgery_procedure_92,P07673/
http://www.nlm.nih.gov/medlineplus/spanish/kneereplacement.html
http://www.reumatologiaclinica.org/es/infeccion-del-sistema-nervioso-central/
   articulo/90250957/

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A Business English Course in the Digital Era: Design and Analysis

Lidia Taillefer

Abstract This research reconsiders the design of a business English course in the digital era, taking into account previous experience both of classroom-based and online learning. After experiencing traditional educational limitations, new technological advantages and student and teacher surveys, we showed that we should follow an integrated approach, as it is more enriching and effective. The objective was to develop a course adapted to the needs and preferences of current learners. A blended methodology is the best option, based on our analyses of all the fundamental aspects for ESP curriculum development: students' needs, specialised discourse, methodology, course content, resources and activities. As the hardest areas to tackle are oral skills, we used online resources, activities and tools (such as Moodle, Skype and podcasts) that were made possible by a plan for technology implementation in our university. Finally, we analysed not only the benefits in the design of a blended course, but also the technological problems associated with the resources, providing digital recommendations to help make them more productive.

Keywords Business English • Classroom learning • Online learning • Integrated approach • Needs analysis • Blended methodology • ESP curriculum • Online resources • Skype • Podcasts

1   Introduction

Nowadays there is a great demand for English as a result of academic and employment needs. Business English (BE) is probably the English for specific purposes (ESP) domain with the most publications. As Alcaraz (2000, p. 72) states, BE refers to English for economics, commerce and finance.

Students need English to communicate in international professions, but also to have access to original academic literature. This is the main feature of ESP: students need English language as a tool. Therefore, three issues justify this research:

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1. The globalization of the business world.
2. The adaptation process of Spanish universities to the European Higher Education Area (EHEA).
3. The need to reconsider BE courses in the digital era.

Undoubtedly, English is the international lingua franca, especially for the business world. Globalization urges business learners to be able to communicate in English. This need is even greater in the European Union (Fortanet-Gómez and Räisänen 2008) due to the free movement of professionals. As Crystal (2003) noted, English is the most widespread language in the world as either a first, second or foreign language, which reduces frontiers. Such a statement is true in every discourse, but especially in the field of economics in general and business in particular. Therefore, business students must be competent in English, both in oral and written communication.

The EHEA, based on the principles of quality, mobility, diversity and competitiveness, is part of the 1999 Bologna Declaration. Some of its proposals are as follows:

• Promoting the use of information and communication technologies (ICT).
• Developing student's sense of self in a teaching/learning process that emphasises tutorial action.
• Implementing e-learning and alternative communication channels.

To consider these, it is clear that a change in methodologies is needed in this new era. Therefore, it is especially important that teaching methods in BE courses be reviewed to suit students' needs. New strategies and techniques should be developed to encourage active and cooperative learning. A new methodology should:

• Design teaching resources adapted to the new technological era and
• Tutor learners' work in order to optimise both traditional and new teacher-learner communications.

2   English for Business Purposes

According to Strevens (1988), a variable characteristic of ESP is that it may use, in specific teaching situations, a different methodology from that of English for general purposes (EGP). For Dudley-Evans and St. John (1998, p. 5), an ESP course should present the content and activities within a context that is real and meaningful to the profession of the students (carrier content) so that it leads to the actual content it is proposed to teach (real content). In fact, Kitkauskiené (2006) insists that ESP teaching should be guided by the professional or social needs of the students: 'Therefore, teaching/learning ESP is said to be speciality oriented, as it is submitted to the specific (professional) needs of the student' (p. 89).

ESP comes from the needs of students, and its linguistic content is based on the register, discourse and genre of the discipline it serves. Following Montero (1988,
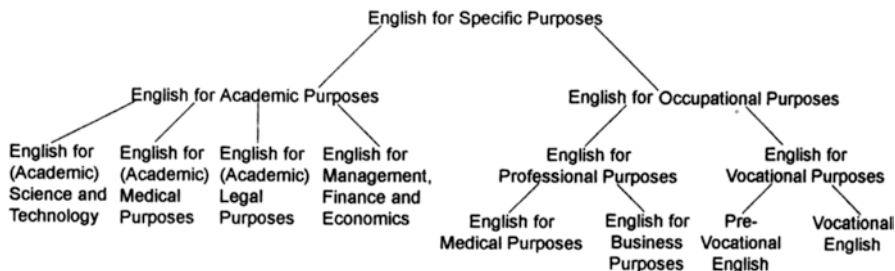
Fig. 1 ESP classification by professional field (Dudley-Evans and St. John 1998, p. 6)

p. 124), English for academic purposes (EAP) and English for occupational purposes (EOP) are the two main branches of ESP. The differentiation between academic English and occupational English can reach different disciplines, as seen in Fig. 1.

In this classification, English is divided into professional fields. English for management, finance and economics are located within EAP, while English for business purposes (EBP) is included within EOP. BE is considered in a professional context due to its working purpose. According to Dudley-Evans and St. John (1998, p. 8), the use of classification trees creates a number of problems by failing to capture the essentially fluid nature of the various types of ESP teaching and the degree of overlap between 'common-core' EAP or EBP and general English. For this reason, they offer a new perspective on teaching English as a continuum from general English to specific English.

Given the importance of learning English for business, this research analyses BE teaching methods to acquire the skills that should enable:

- Undergraduates to follow courses in English with the appropriate achievement (EAP) and
- Graduates to face the course of their professional activity (EOP).

The importance of being proficient in English is commonly recognised in the business field as a key for success.

3 Curriculum Development

In this section, we are going to consider the design of a BE course in the electronic era, taking into account previous teaching experience. After offering both classroom and online BE courses based on traditional and cutting edge teaching methodologies, respectively, we reached the hypothesis that a blended course is the best option according to surveys of students and teachers. Blended learning does not only combine online and face-to-face approaches, as the Australian Department for Education and Training (DET 2003) defined it, shown in Fig. 2, but also 'different modes of delivery, models of teaching and styles of learning' (Procter 2003, p. 3).
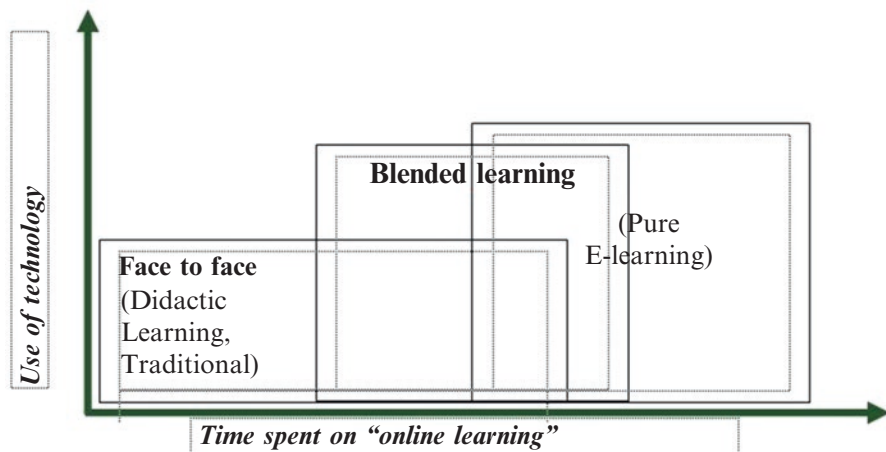
Fig. 2 Conception of blended learning (Heinze and Procter 2004, p. 42)

Procter's (2003) definition is more comprehensive, adding teaching and learning styles. In order to show that a blended course is the best option, we are going to analyse the aspects that are particularly fundamental for ESP curriculum development (Basturkmen 2010): students' needs, specialist discourse, methodology, course content, resources and activities.

3.1 Needs Analysis

Our two BE courses were offered to both undergraduates and professionals with an intermediate level of EGP, so the corresponding classification between EAP and EPP (English for professional purposes) did not work. Due to the varied needs of our students, the contexts of our courses were more related to English for general business purposes (EGBP).

Once we realised that technology tools can develop face-to-face classroom learning, we started using them (Taillefer and Muñoz-Luna 2013). Moreover, we examined how technology motivates students, as most of them are digital natives, and determined that nowadays these new tools should undoubtedly be used, especially to enhance the difficult oral language skills of speaking and listening.

Actually, technology can address deficiencies in this area present in foreign language classrooms: few opportunities to practice oral skills and even fewer opportunities to benefit from practice with a native speaker. Everyone knows that even practicing the L2 with other learners in a typical classroom is limited: 'On average in any class of 20-plus students, a student will get two minutes of contact with that language' (Rusling 2007). We realised how these common handicaps could easily be solved by implementing constructivist activities with Skype that provide excellent opportunities to develop listening and speaking. Situational conversations were

also added that have nothing to do with business issues, such as aspects of daily life called 'bureaucratic negotiations'. Video recording of conversations on campus was the technique used by teachers to keep evidence and track these oral interactions. Results showed that non-verbal communication was key for mutual understanding (Lopez-Ozieblo 2013), especially when the L2 level was low; on the other hand, more proficient speakers could verbally explain cultural issues and comment on them. Therefore, within such communicative complexity, discursive and cultural issues are crucial, and should be considered in our BE curriculum design.

It is very important to support the implementation of technology resources with pedagogical rationale. Constructivist theories are especially appropriate to tech-enhanced foreign language learning. Constructivism (Wilson 1996) places students at the centre of the learning process, making them responsible for developing knowledge instead of waiting to be instructed. This approach is based on active analysis of data, applying new to previous information and building on existing knowledge.

3.2   Investigating Specialist Discourse

Belcher (2004) states that new trends in teaching ESP follow three directions:

- The socio-discursive approach
- The socio-cultural approach
- The socio-political approach

Pasquali (1990) conceives language through the principle of communicability, which can be considered a methodological category related to the concept of teaching language as a means of communication. Therefore, in the teaching of foreign languages, active communication has to be both subject and means of instruction. In an EBP course, it is the communicative needs of the students that determine the objectives. Thus, the communicative approach arose, taking into account students' learning rhythms and allowing them to become responsible and committed to their own learning processes (Miranda 2002, p. 158). After analysing the needs of our BE students, according to the pragmatic paradigm, our teaching follows the communicative competences:

1. Linguistic competence: identifying the rules of the different linguistic levels (phonetics, phonology, grammar and semantics). While an EGP course will attend to these formal aspects of language and attempt perfect proficiency (Montero 1988, p. 127), an EBP course should select the most representative aspects, addressing specific grammatical or semantic situational contexts (e.g., specialist's structures, expressions or vocabulary).
2. Discursive competence: providing the organization of discourse in a coherent and cohesive way (e.g., recognizing some of the elements of BE text structure). We discovered that BE authentic texts are especially motivating for learners, giving them the opportunity to move beyond linguistic competence, as foreign language students have felt 'locked into grammar learning' (Rao 2007). Also, as

'teacher-talk' or 'student-to-student' conversations are basically artificial, we proved how specialists' language exchanges through Skype improve students' discursive competence, where conversation tasks become spontaneous and new constructions are used.

3. Strategic competence: making the necessary adjustments in order to provide effective communication involving the development of cognitive strategies (the ability to analyse, make connections, transform etc.) and meta-cognitive strategies (use of gestures, paragraphs etc.). Another advantage of using Skype relates to collaboration; with the feedback provided by the L1 mate and afterwards by the teacher, the student can expect an improvement in comprehension, can confirm or clarify their understanding and can reduce misinterpretations in the conversation (Jones 2008). Therefore, our experience showed that students' negotiation and clarification strategies with each other also increased specialists' strategic competence. Moreover, BE students who collaboratively negotiated meanings scored higher on tests than those that had worked alone.

4. Sociolinguistic competence: ascertaining the features of specialists' communication in different social contexts and taking into account factors such as the role of each of the partners with respect to the other (colleague, superior, subordinate or unknown), the register of communication (formal or informal) and the appropriate use of language to express communicative functions required in specific situations. We also saw that if we included a Skype practicum in the BE curriculum, students could have access to native speakers not only for their academic tasks but in their free time; in fact, there are many sites for Skype language exchanges. In addition, students can engage with multiple partners, increasing their exposure also to different linguistic varieties (Trudgill 1984), which develops their sociolinguistic competence.

5. Socio-cultural competence: knowing cultural and social factors and how language evolves in specialists' real lives. Since the English language is a communication tool between people of different nationalities, the need for knowledge of the socio-cultural environment function is impaired by the thematic content, i.e., the knowledge of all elements related to the extra-linguistic world the student is going to face (Lado 1957).

6. Attitudinal competence: knowing your own strengths, that is, the ability to learn from experience and a desire for self-development; it can also be a desire to be flexible in unfamiliar specialists' situations, viewing diversity as opportunity. Being in control emotionally is a way to become a trusted advisor and invaluable to the company, as it can assist in developing lasting social networks in the international marketplace. As Hymes (1972) said, 'The specification of *ability for use* as part of competence allows for the role of non-cognitive factors, such as motivation, as partly determining competence' (p. 283). Authentic communication tasks, such as real Skype connections with people from across the world, motivate students to continue the language exchange on their own, developing their attitudinal competence and providing them with opportunities to reflect on both their own culture and the culture of the language they are learning. In an ESP course, we must bear in mind the characteristics of the students and their

motivation in learning the foreign language, apart from their communication needs. From a theoretical point of view, there are four areas that affect student motivation (Dörnyei 2001, p. 44):

- Social motivation (the influences come from the socio-cultural environment rather than the individual).
- Motivation from the perspective oriented to process (student's motivation does not remain constant during the course but is subject to constant change).
- Neurobiological basis of motivation (appreciation of stimulus in the brain through novelty, pleasantness, importance of the success achieved, expectations of the individual to face the facts and social image).
- The motivation to learn a foreign language and self-determination theory (how many rules have been transferred from outside to inside the individual).

3.3 Methodology

Since its origins, ESP has been supported by several linguistic tendencies. As García-Mayo (2000) stated, 'ESP is not a monolithic phenomenon; it developed at different speeds in different countries, and examples of all the phases/approaches that we will see here can be found somewhere in the world at the present time' (p. 28). According to the following chronological table (see Table 1), ESP first focused on register analysis, then discourse analysis and then on skills and strategies. Thanks to the development of applied linguistics in the 1980s, it considered needs analysis and genre analysis. Finally, nowadays it is still dealing with learning processes and using an integrated approach, which is the one we follow. Within the pragmatic paradigm, blended courses result in a more motivating and efficient learning process.

In an EBP course we should not forget the need to develop all the language skills. While in an EOP course oral comprehension and expression predominate, in an EAP course, written skills are preferred. However, in our BEGP course we have to deal with them all, as most economic transactions are made with foreign companies using English as an international language. Oral skills are usually relegated to a second plane, but the need to practice them is important in business. We must also select the right materials for the development of reading skills (i.e., texts related to the student's speciality). Written expression is still fundamental in the BE learner. Students can practice this by having the teacher look at the transcripts or summaries of their recorded Skype-conversations; this also helps develop their written skills.

Table 1 ESP approaches

1965–1974	1974–1980	1977–1987	1980–1987	1982–1990	1987–Present	1998–Present
Register analysis	Discourse analysis	Skills and strategies	Needs analysis	Genre analysis	Learning processes	Integrated approach

3.4   Determining Course Content

The face-to-face and online units in a BEGP course should take into account business culture and organisation, marketing and written and oral communication. These areas should be considered:

1. Business across cultures: Any BE course should deal with similarities and differences across cultures (Morrison and Conaway 2006). Deference and distance are reflected in language. Some languages have forms of address to indicate how familiar you are with someone. English only has one form, 'you', but distance may be shown in other ways (e.g., use of first names or surnames). Here are some assumptions that could lead to potential cultural misunderstandings:

   - For greetings and goodbyes you should shake hands.
   - You should keep physical distance when talking to people.
   - You should not make lots of gestures.

2. Company structure: Businesses may vary in size, from the self-employed person through the small or medium enterprise (SME) to the large multinational in several countries. The people who work for a company are its employees, personnel, staff, workers or workforce (Mascull 2002). But these terms can mean just the people carrying out the work of a company, rather than those organising it: the management.

3. Marketing: This is the process of planning, designing, pricing, promoting and distributing goods or services in order to satisfy customer needs, as well as to make a profit. Companies underline how the special features of their products possess particular benefits. Although non-profit organisations have social goals (i.e., giving money to poor countries), these organisations also use marketing techniques (Cotton et al. 2011). The four Ps are a summary of the marketing mix in order to sell: product, price, place and promotion; a fifth P, for packaging, is sometimes added.

4. Written communication: Mastering written skills is the starting point for an international career (Little 1990). Jobs are normally advertised, so teaching students how to write English application letters or emails and CVs (containing their education, professional experience, skills, training etc.) is a great tool for their future.

5. Oral communication: Before hiring someone, companies contact applicants orally (Remacha and Marco 2007). Depending on the distance, they may arrange an interview or a telephone conversation to check their L2 level. Again, different cultures have different ways of using language. Some speak in a very literal way; others are more indirect (i.e., using hints, suggestions and understatements). The United States tends to be an explicit country, while the British are, in general, famous for not making clear exactly what they mean. It seems that the British use language in a more abstract way than most Americans and continental Europeans. In Britain, there are also conventions of politeness and a tendency to avoid showing one's feelings. Moreover, the British have a tendency to engage in 'small talk' at the beginning and end of a conversation (i.e., talking about the weather, health, business in general and what one has been doing recently).

3.5 Designing Online Resources and Activities

The development of scientific research has been always involved with technology, but what is different today is the speed of technological change. As García-Mayo (2000) states: 'We are now living what has been termed as "the information explosion"' (p. 21). Therefore, nowadays, if we want to enhance students' achieved outcomes, we have to combine classroom training with e-learning, in what we describe as blended methodology. In fact, we have designed online resources and activities with the idea that the educator would first have the opportunity to introduce and explain them (the activities) and then make corrections and eliminate common errors, so that the students complete their own learning processes.

We use Moodle for the course material, which is all in English. As it is a 25-hour course, the material is divided into five sessions approximately of 5 h each. In order to be considered a blended-learning methodology, classroom-based and online resources should be between 25% and 75% of the total activities. Hence the first, third and fifth (and last) sessions are face to face (15 h, representing 60%), so that the instructor is able to introduce the material, give feedback on activities, answer doubts and revise the course. Nevertheless, in the second and fourth online sessions (10 h, representing 40%), students still receive the teacher's synchronous and asynchronous tutoring, both individually and collectively, through forums. Educators should be facilitators of learning and use innovative training methods, no longer depending exclusively on texts but also using e-tools to supplement teaching and maximise learning time. Therefore, the curriculum is designed to accommodate these innovations, promoting students' interactive learning in a more effective way.

In the e-learning platform, students can also find a section devoted to reference works (general dictionaries and English-Spanish specialised dictionaries) as well as electronic grammars and style publications that will be very helpful throughout the course. Students are recommended to follow the order presented in the five sessions, as they are graduated according to their difficulties. In addition to attending the classroom sessions, students have to consult all the links and files and complete the online exercises (through questionnaires and quizzes) in order to cover both theoretical and practical aspects. All five sessions in Moodle have a similar structure:

- Session introduction
- Terminology
- Linguistic revision
- Activities (students are able to save their electronic activities before submitting them; depending on whether there are closed or open questions, correction will be automatic or by the instructor)

The next task consists of students developing an online glossary in a cooperative way (Taillefer and Muñoz-Luna 2011); each student has to introduce 10 English terms or expressions from each session and give their Spanish equivalents. The objective of this electronic activity is not only motivating students' learning but also producing an English-Spanish glossary that they will be able to use in their profes-

sions. Sessions also contain podcasts, Skype practice and a final test, though evaluation is summative. Finally, they find a QandA forum for each session.

Podcasting has many benefits similar to those we saw with Skype within needs analysis. ESP students can find hundreds of free podcasts covering different topics. A search on the Internet reveals that many prestigious universities—including MIT, Harvard, Yale and Cambridge—offer podcasts as supplements to traditional courses. EBP students may find interesting podcasts to practice not only their listening skills but also to increase their cultural awareness of English-speaking countries. Another important factor to consider is the convenience of using them. According to Santhanam et al. (2012), the daily commute is one of the few remaining places where significant time is spent not connected to or engaged with the Internet, and listening to podcasts could fill this gap with real language learning. In fact, Lee and Chan (2007) say that the academic use of podcasting allows accessibility and portability of the teaching and learning experience, while enabling on-demand learner control and customisation.

As with Skype, podcasts also offer BE students access to authentic aural material (Jones 2008). Levy (2009) thinks that authentic materials play an especially important role because they are designed by native speakers for native speakers and therefore provide real data of the L2 culture. In the study by Facer et al. (2009), half of the students who used the podcasts reported an increase in class interest.

Undoubtedly, digital resources are a natural way of communication for Internet generation students. As Blake (2008, p. 5) says, 'networked exchanges seem to help all individuals in language classes engage more frequently, with greater confidence, and with greater enthusiasm in the communicative process than is characteristic for similar students in oral classrooms'. Digital communication is not only a familiar resource but also the preferred tool.

Following current methodology, podcasts offer students the opportunity to process information at their own pace, taking into account learners' differences. Podcasts give students the opportunity to review material, hearing again the pronunciation of new vocabulary or understanding complex topics. According to cognitive theories, there are advantages to learning through multiple senses, as the information received via different sensory channels (i.e., written, visual, oral and aural input) is better processed.

4   Responding to Technological Difficulties

We have seen that there are many advantages to using technological resources. However, there are also some pitfalls that should be considered. Flexible scheduling, one of the key advantages of using Skype, could also be considered one of its main drawbacks: Coordinating a convenient time for students can be difficult. For instance, students from different continents can have a complicated time difference. This means that students on either side have to make sacrifices, participating in the exchange at inconvenient times either very early in the morning, very late at night or during weekends. Another issue with Skype concerns technology requirements. A lack of equipment or insufficient bandwidth connections could easily prevent the

exchange. Even in technologically advanced countries, students attempting to access Skype from school computers could find the programme blocked in their institutions (Mirtschin 2008). Furthermore, in contrast to traditional face-to-face communication, Skype conversations could result in a comprehension challenge due to loss of contextual tips, such as body language and gestures. Finally, pauses could also be misinterpreted due to momentary lags caused by a weak Internet connection.

On the contrary, there seems to be fewer handicaps using podcasts. In the developed world most students have mobile devices that can play podcasts (Viswanathan 2009) or they can at least listen to the podcasts from computers.

5 Digital Design Recommendations

An important question to take into account in a blended course design is the organization of the learning tasks, as technology in itself is not an effective teaching strategy, it is simply a tool. Therefore, pedagogy must back each task. For a Skype exchange, Mullen et al. (2009) recommend using explicit tasks instead of a non-task-oriented approach. The assignments should be specific, with clear instructions and enough scaffolding to motivate students to take part. These should also be structured to enable the instructor to assess participation.

Ways in which educators have successfully used Skype include an inter-school debate (Smethurst 2009) and multiple activities through a language exchange between American and Japanese students (Mullen et al. 2009, pp. 101–118). These tasks have included the following activities:

- A 'find the difference' activity. Students are shown two images that are nearly identical and must take turns describing the images in an effort to pinpoint the discrepancies.
- An 'arrange the objects' activity. The L1 student is shown an image with various objects arranged in particular pattern. The L1 student can also see a window of the L2 student's screen where the same objects are present but not arranged; the L1 student then has to guide the L2 student in an effort to arrange the objects in accordance with the original image.
- Finally, a 'fill in the blank' activity. Based explicitly on a text, the L1 student is presented with a complete sentence, and the L2 student is presented with blanks for each word; the L1 student must give clues—without saying any of the missing words—and the L2 student attempts to guess which words fill the blanks.

There are many other suggestions for the implementation of online resources. For example, when using Skype, students should maintain eye contact with their partner when speaking to a web camera, they should not move too much and they should speak with inflections; actually, clear voices and simple sentences work better. As Mirtschin (2008) suggests, 'the voice needs to take the place of body language'. Required hardware includes a microphone and speakers; headphones are recommended to prevent distracting echoes from the conversation partner's voice. Other features of the application include a chat window, which can be especially

useful if the users have sound difficulties; the screen sharing capability also offers obvious visual benefits to language learners. Although Skype does not technically qualify as open source software, 'the application programming interface is open and third party developers are encouraged to integrate Skype functionality in their applications' (Mullen et al. 2009, p. 104).

On the other hand, if we are implementing podcasts into the EB course design, it is not simply for passive listening: It is so that students can actively construct new knowledge from that input. L2 students should focus not so much on meaning but on distinguishing the foreign language sounds, i.e., its prosody (which includes intonation, rhythm and stress). With authentic and natural speech, learners will be able to identify patterns and make predictions about what will come next that are similar to native speakers' top-down processing. According to Levy (2009), pre-listening tools should be used to activate learners' prior knowledge, just as annotation tools are used to focus learner attention while listening. As we have seen, we can incorporate podcasts into the EB curriculum design for class discussion or in order to present culturally and linguistically authentic discourses. Another activity could be assigning students the task of creating podcasts in order to help them develop all their linguistic skills.

6   Discussion and Conclusions

This action research has evaluated different BE course designs, from classroom to online learning. After experiencing the traditional educational limitations, the new technological advantages and the students' and teachers' surveys, we proved the hypothesis that in an EGBP course we should follow an integrated approach, as the students' written and oral assessments show that a blended-learning methodology is more effective and beneficial.

The objective of this research was to develop a teaching methodology adapted to the needs and preferences of current learners. As the hardest areas to tackle in ESP are oral skills, we used technology in order to solve this common deficiency. We determined that using new tools has many educational benefits, especially dealing with BE, in that it can be a solution to the limited access to native speakers.

Listening and speaking skills can be developed through the use of podcasts and Skype as a result of a successful plan for technology implementation in language teaching (Taillefer and Muñoz-Luna 2014, pp. 260–264). While podcasts provide students with opportunities to develop their listening skills, Skype provides speaking practice. The disadvantages related to these electronic resources are minimal in comparison to their benefits. We have proved through observation[1] how Skype lan-

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[1] In order to analyse students' Skype conversations, in Autumn 2014 several technicians recorded Skype-mate couples in a studio so that the quality of the sound was the best it could be. As all students signed a contract for image and content rights, afterwards the University of Málaga (Servicio de Enseñanza Virtual y Laboratorios Tecnológicos) edited a DVD with some of the Skype conversations.

guage exchanges strengthen students' confidence. In fact, learners confessed feeling anxious and embarrassed before the conversations, but after a few Skype sessions they recognised improvement and were more enthusiastic in subsequent exchanges, according to the students' questionnaires (see Appendix).

Educators must know students' motivation, but they must also implement strategies to increase that motivation. Research shows that authentic resources have a positive effect on learners' motivation and attitudes towards language learning. Increased motivation is likely to increase students' level of effort, which in turn promotes better learning outcomes, showing a significant and positive effect of incorporating electronic activities.

Technological tools can be powerful resources for ESP, especially for BE if used as support for well-defined learning objectives. Actually, if not backed by pedagogical research, they can simply be a distraction to the learning process. However, when used correctly, they really have the power to benefit foreign language learning. Technology is just a tool, and in order to get the students working together and motivate them, the teacher is essential.

In conclusion, these online resources offer many learning benefits if implemented by the teacher with thoughtful consideration to how they will support language skills and communicative competences. Blended learning offers students alternative methods of assimilating and learning linguistic knowledge. The possibilities are nearly endless, and BE educators can find it very rewarding to embrace these powerful innovations.

Appendix

Date of conversation
Use the day/month/year format, e.g. for March 14th, 1945: **14/3/1945**

[   ]

·5

Time of conversation

[   ]

·6

Duration of conversation

[   ]

·7

Language(s) used in the conversation

[   ]

·8

Rate the connection technical quality overall

	1	2	3	4	5	N/A
1 (bad), 5 (good)	○	○	○	○	○	○

·9

Can you hear your Skype-mate properly?

	1	2	3	4	5	N/A
1 (bad), 5 (good)	○	○	○	○	○	○

·10

Rate the technical quality of your talking to your Skype-mate

	1	2	3	4	5	N/A
1 (bad), 5 (good)	○	○	○	○	○	○

·11

Writing (if necessary)

	1	2	3	4	5	N/A
1 (bad), 5 (good)	○	○	○	○	○	○

·12

Image quality

	1	2	3	4	5	N/A
1 (bad), 5 (good)	○	○	○	○	○	○

·13

Echo

	1	2	3	4	5	N/A
1 (bad) 5 (good)	○	○	○	○	○	○

•14

Please, describe other problems

[   ]

•15

Having previous email contact was useful

	1	2	3	4	5	N/A
1 (disagree), 5 (agree)	○	○	○	○	○	○

•16

Knowing the questions was helpful

	1	2	3	4	5	N/A
1 (disagree), 5 (agree)	○	○	○	○	○	○

•17

My Skype-mate understands me

	1	2	3	4	5	N/A
1 (disagree), 5 (agree)	○	○	○	○	○	○

•18

I understand my Skype-mate

	1	2	3	4	5	N/A
1 (disagree), 5 (agree)	○	○	○	○	○	○

•19

My Skype-mate guides the conversation

	1	2	3	4	5	N/A
1 (disagree), 5 (agree)	○	○	○	○	○	○

•20

My Skype-mate keeps the conversation within my abilities

	1	2	3	4	5	N/A
1 (disagree), 5 (agree)	○	○	○	○	○	○

•21

My Skype-mate uses some new words

	1	2	3	4	5	N/A
1 (disagree), 5 (agree)	○	○	○	○	○	○

•22

My Skype-mate explains new words

	1	2	3	4	5	N/A
1 (disagree), 5 (agree)	○	○	○	○	○	○

•23

My Skype-mate talks at a good pace.

	1	2	3	4	5	N/A
1 (disagree), 5 (agree).	○	○	○	○	○	○

•24

My Skype-mate doesn't let me talk enough

	1	2	3	4	5	N/A
1 (disagree), 5 (agree).	○	○	○	○	○	○

•25

I feel comfortable with my Skype-mate

	1	2	3	4	5	N/A
1 (disagree), 5 (agree)	○	○	○	○	○	○

•26

I would like to repeat the experience

	1	2	3	4	5	N/A
1 (disagree), 5 (agree).	○	○	○	○	○	○

•27

I felt this was useful

	1	2	3	4	5	N/A
1 (disagree), 5 (agree).	○	○	○	○	○	○

•28

How many sessions **would** you like to have a month?

[   ]

•29

How many sessions **could** you have a month? (considering your workload).

[   ]

•30

Why were you interested in doing this?

[   ]

•31

Other comments and suggestions (if applicable, why do you disagree with the statements above? What did you learn? How can we improve the experience?)

[   ]

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Online Course Design for Translation into English

Leah Leone

Abstract Online translator training can provide students the professional advantage of learning within the same environment they will eventually work. Yet this can only be accomplished if instructors narrow the potentially unwieldy possibilities of online course delivery to align closely with the content and contexts of professional language services. This chapter will outline how to prepare for and implement an online translation course and is especially directed to those who may be new to online learning or to formal translator training. Informed by the practice of backward course design, this chapter will start with methods for conducting a needs analysis, outline effective uses of the virtual platform, and close with a number of suggested technology-based translation activities.

Keywords Online translator training • Professional language services • Same work environment • Content • Context • Online translation course • Online learning • Backward course design • Needs analysis • Virtual platform

1 Introduction

While the field of English for specific purposes (ESP) generally involves the instruction of non-native speakers in specialised uses of English, the skills ESP encompasses are highly relevant to L1 English students as well—especially those who wish to become professional writers, such as translators. Hyland (2011) takes as basic tenet of ESP 'that we communicate as members of social groups and that different groups use language to conduct their business, define their boundaries, and manage their interactions in particular ways' (p. 8). Consequently, he argues, instructors of English for specific purposes must prepare students to communicate as 'disciplinary insider[s]' (p. 8). In just this way, translators are expected to render foreign language text into an English that reads so naturally within its discourse

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community that it appears to have been originally composed by an L1 technical or professional writer. L2 ESP students may have academic or professional backgrounds in areas such as medicine, technology, law or finance, but lack knowledge of the discursive practices of those fields in English. Yet many L1 English translation students must learn *both* the technical content and the discursive aspects of those fields to produce translations that read like the work of disciplinary insiders. For students to communicate and conduct themselves as such, their learning experiences must approximate those disciplines as closely as possible (Kiraly 1995; Dudley-Evans and St. John 1998; Hutchinson and Waters 1987).

Online course delivery is especially propitious for translator training because it mimics the environment and tasks most students will encounter upon entering the profession. As Tymoczko (2009) points out, '[i]ncreasingly, translation is undertaken by teams whose only connection is a virtual electronic network' (p. 403). Quite like an online translation course, in the language services industry, the use of translation environment tools; terminology research, including translator discussion forums; receipt of instructions and feedback; and document receipt and delivery all occur almost exclusively online. This simulation of the professional translation environment is key in translation pedagogy, for as Kiraly (1995) writes, '[w]e cannot hand our students a professional translator self-concept; we can only help them acquire one for themselves by putting them in situations that will raise their consciousness about what it means to translate professionally' (p. 114). Optimal creation of such professional translator situations may, in some instances, require certain consciousness-raising on the part of instructors well, be it with respect to online course delivery, unfamiliar areas of translation specialisation or the language services industry.

This chapter outlines suggestions for designing and implementing an online course in translation. The approach to this discussion takes Belcher's (2009) assertion as its starting point: When designing new courses, ESP instructors may occasionally find themselves entering 'as a stranger into strange domains—academic and occupational areas that may feel quite unfamiliar' (p. 2). In the case of translation, instructors may find themselves required to instruct subject areas in which they do not specialise professionally as translators, or as is increasingly the case in the United States, foreign language instructors must teach translation courses while having limited professional background in the field (Maier 1998; Williams 2013). This chapter seeks to be a resource for instructors new to translator training or new to online learning. The examples provided throughout the chapter are intended to build upon one another within the framework of a single, graduate-level course that surveys the major professional genres of medical, legal, financial and technical translation. The tools, resources and activities we discuss will nevertheless be relevant to a wide range of specialised genres and academic levels of translation instruction.

2 Preparing for Online Translation Instruction

To begin with some key terms, the platforms currently available for online course delivery, such as Blackboard, Moodle or Desire2Learn, share some general features:

- a **content page**, where course readings, texts for translation homework and assignment instructions can be posted and organised into thematic units;
- a **discussion forum**, where students can post responses to instructor or student-moderator questions, discuss problems and share solutions on homework tasks, reflect on reading assignments and respond to one another's posts;
- an **online quiz tool**, where instructors can create various types of learning assessments and evaluations;
- a **drop box**, where students can submit homework; and
- an **online conference room**, where students and instructors can have live text, audio or video chat, make presentations, work collaboratively in real time on a single document or share their individual computer screens with others.

In this discussion of online course design for translation, we will make a number of suggestions for implementing these tools, but will not discuss their basic principles. For general information on online course design, see Ko and Rossen (2010), Rovai et al. (2008), Rudestam and Schoenholtz-Read (2010), Thormann and Zimmerman (2012) and Vai and Sosluski (2015).

Online platforms for translator training and the various technological tools that can be incorporated into them undoubtedly offer great potential for placing students in a position to learn first-hand what the translation profession truly entails. However, innovative applications of technology do not guarantee student learning. Like any other pedagogical tool, technology use must be targeted toward students' acquisition of the skills and knowledge they need to successfully meet the goals of the course. In using technology for its own sake, instructors will likely commit what Wiggins and McTighe (2005) call the twin sins of 'aimless coverage of content and isolated activities that are merely engaging (at best) while disconnected from intellectual goals in the learners' minds' (p. 56). This is to say that all of the online learning platform components as well as any external technology must be deployed exclusively in service to the course's objectives.

Deciding what these objectives must be can largely be accomplished through a needs analysis, wherein instructors collect the information they need to design their course to best meet the professional and learning needs of their students (Basturkmen 2010; Flowerdew 2013). In a translation course, these needs will issue from (1) the academic programme, in the form of programme objectives and intended learning outcomes; (2) the professional standards for translators that are stipulated by professional translator associations, national certifying bodies and by businesses and organizations that employ translators; (3) student input; and (4) the field(s) of specialisation upon which a course focuses, such as legal, medical or technical

translation, and the specific competencies translation students must acquire in order to communicate like disciplinary insiders in those areas.

The needs analysis, while a starting point, will overlap with and continually inform the design and execution of the course (Dudley-Evans and St. John 1998). In examining these four areas, instructors will not only enhance their knowledge of the discursive features of the professional fields in which translation students may specialise, they will also establish the core concepts and tasks that comprise those fields and the knowledge and skills students should correspondingly acquire to perform successfully within them. Moreover, in conducting the needs analysis, instructors will likely collect a useful selection of texts and other materials that may be incorporated into course content and learning activities (Belcher 2009).

2.1 Academic Programme Objectives

With respect to the incorporation of academic programme objectives into the needs analysis for an online translation course, the most obvious requirement is these objectives' existence. Those instructors teaching within the European Master's in Translation network will likely have the *Competences for professional translators, experts in multilingual and multimedia communication* (Gambier 2009) integrated into or functioning as their programme objectives. The existence of programme objectives is by no means ubiquitous, however. In the United States, only with the passage of the Higher Education Opportunity Act of 2008 were public universities required to develop objectives at the institutional, departmental and programme levels, as funding increasingly has become tied to student outcomes, which are measured against these objectives (Hernon et al. 2013). Funding and accreditation aside, the creation of academic programme objectives is an extremely worthwhile endeavour; they provide students and instructors with a comprehensive vision for what students should take away upon completion of an academic programme and methods for measuring the degree to which they have done so.

Programme objectives may be considered the overarching goals of an academic program. In the case of a postgraduate translation curriculum, programme objectives for students may include professional development, critical thinking, research skills, translation proficiency or conversance in translation theory. Tied to each overarching goal should be a set of intended learning outcomes (ILOs), which constitute specific evidence of students having met a given objective. Intended learning outcomes represent measurable demonstrations of students having acquired the knowledge, skills and attitudes embodied in programme objectives (Allen 2004; Hernon et al. 2013). Programme ILOs may in turn become objectives for an individual course, which may be broken down to form the bases for assessments and evaluations.

2.1.1   Sample Programme Objective and ILOs

The following is an example of one potential translation programme objective—the acquisition of professional skills—and a corresponding list of intended learning outcomes:

Programme Objective
Professional Skills: Students will demonstrate professional competency in their performance of the skills related to the translation industry.

Intended Learning Outcomes

– Students will produce professional technical translations, successfully negotiating linguistic, cultural and technical challenges.
– Students will communicate clearly and effectively in a variety of professional contexts.
– Students will effectively apply the most relevant technology in translation.
– Students will employ the fundamental principles and operational practices of the language service industry, including quality assurance standards, best practices in entrepreneurship and project management, and codes of ethical conduct in the their areas of specialisation.

   The enumeration of specific goals and intended learning outcomes provides instructors a clear target toward which to aim when assessing which student needs must be addressed during course development. With the ILOs above, for example—using backward course design—instructors would need to consider means for determining students' success at negotiating linguistic, cultural and technical challenges or critically engaging with the ethical standards of the profession, and then create learning activities through which students might acquire the skills and knowledge required to complete those tasks. While these academic programme objectives should be developed in alignment with the standards held by the professional worlds into which students will graduate, direct consultation with these professional standards will also provide instructors with important factors that they may want to consider when conducting needs analyses for their individual courses.

2.2   Professional Translation Standards

The existence of standards of conduct and codes of ethics are part of what distinguishes the professions from other forms of labour and from one another. When developing a course, instructors must take these norms into account if they wish to adequately prepare students to enter into their chosen professions. Specialised translators have a double obligation when it comes to adherence to professional standards of conduct and ethics: one to the translation profession and another to the professional field on which they choose to focus. While legal translators, for example, are not usually lawyers themselves, practical knowledge of the expectations for

lawyers' conduct in both their source and target countries will help ensure that their translations function effectively within the legal realm of the target system. At the same time, translation students must also be competent in the tasks associated with the language services industry, and adequately prepared to initiate the certification processes associated with professionalization in their field. The following are a number of possible sources for researching professional aspects of translation and methods for incorporating findings into course design.

2.2.1   Professional Codes of Ethics and Standards of Conduct

Translator associations have played a crucial role in the professionalization of translation, an occupation whose professional status still varies widely from country to country (the United States, for example, still offers no mechanism for becoming a legally sworn translator). Such organisations advocate on behalf of the profession and its practitioners, establish a consensus on the knowledge and training needed to enter the profession, and ensure the integrity of the profession by requiring adherence to a professional code of ethics and controlling entry through certification and continuing education requirements. Given the impact these bodies may have on students' careers, it behoves translation instructors to consult membership requirements of the regional, national and international translator associations with which their students are likely to become involved.

This research into translation organisations may influence the development of a course's learning objectives, but also provide the bases for any number of course activities. Professional simulations or case studies based on codes of ethics and standards of conduct, for example, can facilitate critical thinking about the kinds of ethical and professional conflicts students may encounter in the industry, and prepare them to enter the profession not only cognizant of said code of ethics, but already having applied it in practise. Students' locations and the course's focus will determine which translator associations an instructor chooses to consult. Instructors teaching legal translation, for example, may refer to codes of ethics of the National Association of Judiciary Interpreters and Translators (NAJIT) if located in the United States or the European Association for Legal Interpreters and Translators (EULITA) if located in the EU. Needless to say, an Internet search for translator associations will provide resources for many specialisations and regions around the world.

As an example of how to incorporate these codes into the needs analysis, let us consider the European Division of the International Federation of Translators' (FIT) *Code of Professional Practice*. After consulting, for instance, the *Code*'s Third Canon, 'Relations with fellow translators/interpreters', which outlines standards for advertisement, competition, collegiality and dealings with partners and employees, instructors may want to make 'professional social interaction among students' (*Code of Professional Practice*) a goal for the course. Relevant skills and attitudes for such a goal might then include the ability to provide objective critical feedback, collaborate effectively with other students or willingly share resources.

Corresponding activities and assessments may thus include peer review of translation assignments based on professional quality standards, project-based learning activities (Kiraly 2005) or online forums where students discuss problems and offer suggestions and resources for completing translation assignments.

2.2.2 Certifying Bodies

Many professional associations also serve as certifying bodies that control entry into a given profession. In some countries, only publicly certified translators may translate legally binding or state-issued documents. In the United States, where such official positions to do not exist, the American Translators Association (ATA) certification represents the closest approximation to such a designation, and many language service providers (LSPs) in the United States prefer to work exclusively with ATA certified linguists. Ensuring that students meet the qualifications for certification and preparing them to sit for qualifying exams should also come to bear on the development of course goals and content.

Taking the ATA certification exam as an example, instructors may consider the organisation's prerogative to forbid the use of the Internet, as it claims, '[t]he exam is a test of knowledge and experience. It is not a test of how well you can research and use online resources' ('ATA Certification Program: Frequently Asked Questions'). In other words, while skilful use of Internet resources will surely be a goal of any online translation course, instructors will also want to consider the other kinds of knowledge the exam assesses, and design activities through which students will acquire it. If there is one particular exam for which students are likely to sit upon graduating, instructors might also consider using that exam's scoring procedures when grading student translations. Likewise, if the certifying organisation provides a list of grading standards detailing its expectations for grammar and usage, such a document may be incorporated into course content or used as an assessment tool. Students will thereby become familiarised with the certifying bodies' expectations for their performance, and accustomed to the kind of evaluation they will face in the profession.

2.2.3 Employer Requirements

In an industry so predisposed to changes—be they in information and communication technologies, market need for specific languages or globalisation trends for new or changing industries—translators must actively stay current with the skills and knowledge required to perform their jobs. Indeed, the actual definition of a professional linguist's position is constantly evolving with the new types of jobs LSPs create as they seek to innovate and meet changing client demands (Pielmeier 2014). To this end, instructors should periodically consult translator job vacancy announcements and general employer requirements for language services to ensure that the skills they are teaching match those that students' future employers demand.

Instructors may also consider using translator job vacancy notices as student self-assessment tools. At the end of a course or at certain points throughout the programme, students could be asked to conduct a hypothetical job search online and reflect upon the degree to which they believe their skills match those being called for in the industry. Students' metacognitive awareness of their ability to perform the tasks associated with the course is an essential aspect of student-centred learning (Weimar 2002).

2.3   Student Input

Translation students, particularly at the introductory level, may not be able to participate in needs analyses in quite the same way as students in traditional ESP courses, for their exposure to specialised content, and to the profession of translation, for that matter, may be limited. A learner-centred approach, however, will seek venues for students' input regarding their needs as *learners*, even if they are unprepared to articulate or anticipate their needs as *professionals*. Gauging student interest in various fields of translation and leveraging the professional experience students bring with them to the programme will allow instructors to shape their courses in the most engaging way possible. At the very beginning of an online course, inviting students to discuss their previous experience and the topics which interest them most will inform instructors of student needs and highlight potential assets upon which to draw.

Instructors cannot, especially when teaching survey courses, expect to be experts in every field. Students moving into translation from other careers may provide insider information on their former profession's communication styles, terminology and professional expectations, which can be a resource for the entire class. Additionally, if students express particular interest in a given subject area, instructors may seek out additional readings, translation texts, learning activities, etc. As isolation or the depersonalization of learning can potentially be major drawbacks to online learning, this attention to student interest may go a long way in making the connections students need to stay engaged. An introductory forum is perhaps the most useful way to initiate social connectedness and demonstrate instructor concern for students' needs and interests.

2.3.1   Introductory Forum

One of the first tasks students should be asked to perform in an online course—or indeed, even a few days before the official start of classes—is to participate in an introductory forum in which they answer questions about themselves, their experiences and their expectations for the course. Questions that elicit unique personal information will help start conversations among students who may be curious to learn more about their peers; questions about student learning interests will

demonstrate instructor concern about their needs; and questions about how to best succeed in online learning will allow for peer and instructor support of newer students, and help those students who have already taken online courses become cognizant of their own learning processes (Bonk 2012).

The following is one potential set of questions that could be used in an introductory forum. Students may be encouraged to upload a photo as well so that classmates and the instructor can connect faces with the names of the individuals with whom they will be working for the duration of the semester. Instructors' own responses to the questions should be the first post in the forum, as a model for students and as a way to make a personal connection with students as they enter the class.

Introductory Forum

– Name:
– Language combinations:
– Where are you from? Where are you living currently?
– How did you learn your second language?
– What is your favourite novel, film, television show, poem etc.?
– What are eight verbs that you associate with yourself?
– What is your professional/educational background?
– After looking at the syllabus, which topic interests you most? Why? Are there any translation topics that interest you that are not located in the syllabus?
– Have you taken an online course before? If so, what suggestions do you have for fellow students so that they experience success in this course?
– Online courses are a major time commitment. How do you intend to make time for this course?
– What is your greatest concern about this course?

Questions about student interests and concerns allow instructors to address issues immediately within the forum in an individual post or to summarize and respond to similar concerns expressed by multiple students in a response to the group. Furthermore, the input instructors receive about student interest and experience will allow them to make corresponding modifications to the course before class is actually underway.

2.4   Professional Discourse Communities

While excellent knowledge of the source language is of fundamental importance to translation, students are only able to translate as well as they are able to write in the target language. English for special purposes differs from other types of English instruction in that students must learn to make a distinction between what constitutes good writing by common standards and what constitutes credible, professional writing that will function effectively within its intended discourse community. Translation instructors will be required to teach a variety of Englishes as the target language, depending upon the professional specialisation being studied.

For this part of the needs analysis, instructors not already familiar with specific discourse practices of a given profession will need to research the types of documents that are translated within that field and contexts in which they are used, the intended primary and secondary audiences for the translated texts, and those readers' expectations for documents' register and tone, jargon and technical terminology, syntax, and register-specific collocations, among others (Baker 2011). Basturkmen (2010), Belcher (2009) and Paltridge and Starfield (2013) are resources for researching the discursive and rhetorical aspects of a given profession. Indeed, as other chapters in this book discuss, new information technologies, such as corpus tools, open-access electronic media, online conferencing and social media have taken this research in important new directions.

Useful teaching content can arise from researching professional discourses, allowing instructors to point out specific lexical and grammatical issues of which specialised translators must be aware. This information may include general tendencies of profession-specific writing, such as the extensive clausal embedding in legal documents or the preference for passive voice in the methods section of scientific papers (Westbrook and Cooper 2014). At the same time, such research may also reveal linguistic aspects as specific as when the term *common law* collocates with the preposition *at* or when it takes the definite article (Reinhart 2007), or when to spell the term *phosphorus* (spelled with a *u,* the noun, referring to the element P) as opposed to *phosphorous* (spelled with *ou*, an adjective describing compounds that contain phosphorus) (Day and Sakaduski 2011).

Such knowledge is extremely important, but impossible to cover completely in one or even multiple courses. For this reason, while it is essential to have a solid foundation in the basics of professional writing within specific discourse communities, it is equally, if not more vital that students learn how to conduct this research themselves. The wide range of hyper-specialised topics our students will encounter, not to mention the incredible speed with which technologies advance, is constantly creating both new subject matters and new tools for translation. Consequently, 'information brokering' skills—knowing how to acquire and apply new knowledge, be it about the discursive practices of a specific professional field, unfamiliar terminology or jargon, or systemic differences between source and target professions—are as important as any content we may teach (Obenaus 1995). In other words, instructors' research processes will not only generate course content and inform their learning objectives, but can provide instructive models for students and should therefore become part of the content itself.

3   Course Content, Assessments and Learning Activities

Breaking down the individual tasks and information that comprise each learning objective, instructors can select the materials and learning activities that will enable students to achieve course goals and organize the course in a progression that builds upon previously acquired knowledge. With respect to instructional materials,

instructors of online translation courses may choose one or several textbooks, write out or digitally record lectures, select articles from journals or trade magazines, and provide parallel documents or other resources, including those encountered during their needs analysis. Rather than making specific suggestions on content, which will vary according to the professional specialisation of focus, students' academic level and instructors' preferences, this section will present a variety of technology-based formative assessments and learning activities that can help meet a variety of learning objectives.

3.1 Using the Discussion Forum for Translation Assessment

While translation is a field that is necessarily product oriented, a translated text alone may not completely demonstrate student learning. Producing an accurate translation that functions within its intended discourse community is certainly an important summative goal. However, if the process students took to arrive there was inefficient, requiring an excessive amount of time to locate the terminology resources they needed, or was conducted unethically, with students lifting large sections of text from an online translator or classmate, then an important part of our professional goals for them have gone unmet. Employing assessments of students' translation *processes* not only builds their metacognitive knowledge, but allows instructors to verify that students arrived at their solutions through professionally appropriate means.

The discussion forum is one venue for assessment that may be used to make students' translation processes visible. Before the translation assignment, students may be asked to locate parallel documents and discuss some of the discursive features they detect or to survey terminology resources and share with their peers. While working on the translation, students may discuss particularly difficult terms or passages and share solutions with one another, and upon finishing the translation, students can reflect on any number of specific questions about the translation process, such as how long the task took, the most useful resources they found, and the most problematic passages they encountered and how they handled solutions to them.

3.2 Terminology Logs

Locating terminology resources online can prove a challenging task for novice students. One the one hand, they may lack proper discernment of what constitutes an unreliable resource—such as an unmediated discussion forum, an online dictionary with limited entries, or an indiscriminately assembled translation corpus. On the other hand, students may make improper use of reliable resources, simply choosing the first synonym they find without considering if it fits the context, or

without cross-referencing to be sure a given term is the most commonly used within a specific profession. In this case, a terminology log may prove a useful assessment tool. In such a log, students may be required to include a source term, the context or field in which it is being employed, the translation they have selected, and the hyperlinks or reference data for the resources they consulted and cross-referenced. Instructors interested in assessing students' ability to recognize context-specific collocations as individual terms may simply require a minimum number of entries in the log and let students include whichever terms they needed to look up. Instructors wanting to focus more exclusively on terminology research may highlight the terms in the source text that students will be required to include in their logs. Terminology logs completed in MS Excel can also easily be imported into almost any other terminology management tool, which students can then leverage once working professionally.

3.3   Submission and Writing Guidelines

Nearly all professional and academic journals publish their submission and writing guidelines online. These can be used in a number of ways to help students become aware of target audiences' expectations, as well as of some of the discursive aspects of a given field of specialisation. The following are several learning activities that use submission requirements as instructional material. The activities could help students meet course objectives such as assessing source texts' purpose and intended audience, discovering the discursive features that correspond to that that purpose, and creating analogous effects in their translations.

3.3.1   Consulting a Variety of Guidelines

Before completing a translation assignment, students may be asked to consult the submission guidelines of a selected number of professional journals within whose domain the source text falls. Instructors may provide the names of major venues or assess students' ability to identify reliable and reputable sources by asking students to locate these journals on their own. Students can then post in the discussion forum a summary of the general linguistic or rhetorical trends they have found to characterise the field of specialisation and point out any major differences they have found among journals. Students can comment on similarities and differences that exist among their discussion posts and work as a group to identify the key items they will need to keep in mind upon translating a text from that particular genre.

3.3.2   Applying Different Style Guides

After completing a translation, students could be required to submit multiple versions of the target text, each written and formatted according to different style guides, for example, both APA and Chicago, or according to different submission guidelines for major journals. The variation among the different versions of the target text could range from citation styles and subheading format to notable differences in tone, register and terminology.

3.3.3   Peer Review

To incorporate additional learning goals, students might be asked to peer-review their classmates' work and use a given professional style guide or journal submission requirements as the criteria for evaluation. This activity could be useful as part of a larger group project or function as a quality review step for individual translation assignments. Needless to say, such an activity would encourage students to think about their own attentiveness to project requirements both in and out of class.

3.4   Existing Translations

The Internet has given us access to millions of documents in hundreds of languages. The multilingual websites and online documentation of multinational corporations, intergovernmental organisations, economic unions, multilingual nations, nongovernmental organisations, international consortiums, etc. provide a wealth of examples of strategies and approaches to translation. Instructors can use the translations these organisations provide as source material for a number of activities. Comparing source and target texts, students can see first-hand how professional translators handle difficult terminology, systemic differences, and distinctions in discursive practices between source and target cultures. The following are some sample activities that can be carried out with existing translations that, in addition to helping students identify rhetorical features of various discourse communities, may aid them in identifying effective strategies for dealing with individual translation problems, and thus applying similar strategies in their own translations.

3.4.1   Comparing Discursive Practices

Frequently, the more exclusive a profession is, the more arcane and prescriptive its language. While students can be taught some prescriptive aspects of professional language usage through text books and lectures, the construction of this knowledge for themselves may better help students retain this information and apply it in new

contexts. With countless examples available online, students can spend time observing selected discursive features in their working languages, and analysing how and when these features appear in translation.

As an example, deontic uses of modal verbs in English language law are highly prescriptive. After briefly explaining through a course reading or lecture the standard legal uses of *shall*, *shall not*, *must*, *may*, *can,* etc., students could be provided (or asked to find) a legal document and reflect on what is being imposed, permitted or prohibited in every instance in which a modal appears. The reflection could take place in the discussion forum where students can provide the Internet links to the document(s) they chose and provide a general summary of the types of uses they encountered. If students have all used the same document, they could discuss any variation they note amongst their reflections, point out aspects others may have missed or comment on anything else that caught their attention in the text.

A future activity could then be to select a legal document (or series thereof) and its English translation and to ask students to note the source language terms that correspond to English language modals. In cases where the same source terms are translated into different modals in English—for example, the Spanish modal *deber*, which can be translated as *should*, *must* or *ought*—students can use the forum to discuss the context in which the terms are used and conjecture why translators have made the choices they did. Corpus tools allow students to make these kinds of observations on a vast scale, as other chapters in this book describe. Spending time closely reading texts and making these connections for oneself also has an important place in translator training, engaging students critically with professional content and the language in which it is conveyed.

Similar activities could be carried out with the use of the passive as opposed to active voice in medical, legal, technical or scientific texts. Comparing source and target texts, students can observe strategies for converting passive to active in translation, when working from languages with more frequent passive usage than English. Likewise, students can note when the passive voice is preferred in specific texts or contexts of the different professional genres. Finally, with the existing translations as models, students can incorporate the strategies they have observed into their own translation practice with translation assignments that feature the professional discourse practices they have studied.

3.4.2   Editing

In seeking out existing translations, students and instructors are sure to find dozens of examples of work performed by non-professionals or by translators working into their L2 without sufficient fluency. These translations can provide a number of activities for building students' skills in writing for the professions. For example, students could be asked to read a translation and to discuss in the forum the ways the text fails to conform to the discursive practices of its intended audience. Students can also edit these texts and discuss the aspects they found required most attention.

Prior to the editing process, students could collaborate in the forum to set up a list of items to be checked during the review, using criteria specific to the professional field they are studying.

3.4.3   Comparative Syntax

When teaching how to translate specific grammatical structures, instructors can use existing translations as real-world examples. If the source language tends to use run-on sentences, passive constructions, non-equivalent verb tenses, etc., students can consult the work of other translators for authentic examples of translation that is credible and acceptable to the intended readership. Instructors may assign texts they have chosen or require students to conduct a search for sample translations. Students can then catalogue the strategies they find and collaborate with their peers to create a running list of problems and potential solutions that serves as a resource for all. Such a list can be especially helpful, as textbooks dealing with comparative syntax in translation for specific language combinations are still rather difficult to find.

3.4.4   Comparative Systems

When translating texts intended for specific professional communities, translators must frequently deal with systemic differences in the ways those professions are carried out between source and target cultures. There may be different legal systems, medical practices, legislative issues or governmental bodies, to mention just a few. Existing translations provide students working examples of how these kinds of fundamental differences are accounted for. After first observing a source text for the kinds of terminology, practices, attitudes and beliefs for which they do not find a ready English-language equivalent, students can compare the text against its translation to see how other translators have handled these issues. As a practical example, France's Court of Cassation publishes a description of its functions in six foreign languages (*Court de cassation* 2016). In countries such as the United States, where there is no cassation court, close reading of how these culture-specific items are translated may be especially instructive. Whether working on texts they have found individually or on a single text assigned to all, students will surely find ample material to discuss in the online forum.

3.5   *Terminology Management*

The abundance of existing texts and their corresponding translations also provides material for working on students' terminology research and management. The terminology log discussed in Sect. 3.2 of this chapter is one useful tool for learning and assessment of terminology research and management. The numerous software and

cloud-based terminology management systems will not be addressed here, but many do offer free, trial or education-discounted versions that can be incorporated into online translator training. The following activities included here correspond to course goals such as executing effective terminology research and managing terminology and translation resources.

3.5.1 Term Recognition

As novices, translation students may fail to recognise register-specific collocations as terms, and look up individual words in a dictionary rather than search for a terminological unit in a glossary, database or Internet search engine. To assess their term recognition abilities, instructors can assign a web page or other technical document that is written in students' source language and ask them to create a glossary. If students make multiple entries for what should be a single term—the Spanish *cimentación* as 'foundation' and *soterrada* as 'hidden', for example, instead of *cimentación soterrada* as 'in-ground foundation'—instructors may spend additional time addressing techniques for recognising words as terms.

3.5.2 Parallel Texts

As print and online dictionaries, forums and glossaries often do not provide adequate translations of register-specific collocations found within specialised professions, students may be required to cross-reference the terms they find in at least one working document from the field to which their translation corresponds. Avoiding false cognates and the misuse of terms with special denotations in professional contexts is fundamental to students' success in the translation industry. Encouraging them to check and double check their translations through parallel documents is one way to heighten their awareness of terminology usage in the professions, and to ensure they make a habit of knowing rather than guessing the most appropriate translation for any given context.

As one example, if students come across the Spanish term *existencias* in a financial report, a cursory look in the dictionary might provide them with the English term 'stock'. While this is a possible translation in the finance genre, students must keep in mind the various denotations of 'stock' in English. 'Stock' can be the capital share of a publicly owned company, which in Spanish would be *acción*. As students research Spanish and English financial documents, they will find that in a financial report, the term 'stock' occurs under the heading of *patrimonio neto* (shareholders' equity) as the English translation of *capital en acciones*. However, the term *existencias* appears under the heading *Activo* (Assets), which parallel documents will reveal to be translated as 'inventory'. The use of 'stock' instead of 'inventory' under the assets heading of a financial report would be instantly recognized as an error within the discourse community of finance, casting doubt on the credibility of both

the company and the translator. To avoid such errors and communicate as disciplinary insiders, translation students must make a habit of consulting the English-language texts that typify the field in which they are working.

3.6   Online Conferencing

For many students, a main draw to online education is the flexibility it provides, allowing them to do schoolwork at times that do not conflict with their jobs or other commitments. Synchronous meetings, where groups of students or the entire class meet together in a live, online conference may thus be met with reluctance. However, considering the importance of interpersonal interaction to online leaners' engagement with and persistence in a course, not to mention the intellectual, social and instructional benefits derived from student discussion, including a synchronous component to an online translation course proves worthwhile. Synchronous discussions can almost always be recorded and viewed by students who could not attend or be reviewed by students who would like to revisit a concept or technique.

3.6.1   Synchronous Lectures

While it may not be feasible to hold synchronous lectures regularly, there are occasions in which they may actually be a timesaver or provide other benefits that cannot readily be obtained from asynchronous venues. At the beginning of the semester, during the first or second week of a course, a live lecture with all students (or as many as can attend) is an excellent way to help students feel connected to one another and to the instructor. Instructors could use this lecture to demonstrate the main features of the online platform, discuss course goals and expectations in greater depth, and allow students to ask questions about the syllabus and course layout and receive immediate feedback. This live discussion, in which all students can participate, will allow instructors to avoid answering the same questions over and over from individual students, and is thus a good tactic to use whenever dealing with a subject that is particularly challenging.

   When demonstrating how to perform a given activity online or onscreen, instructors have the option of recording a screencast of themselves performing the activity and narrating each step in the process, which they can post in the content section of the online platform for students to access and watch on their own time. However, it may be useful to teach particularly challenging tasks in a synchronous class, demonstrating a skill and then asking students to open a new browser and try the task themselves. This will allow students to practice the skills immediately upon being taught and give them the opportunity to ask questions and receive feedback instantly.

3.6.2 Review

Students can be assigned into groups to review translation assignments together. With the source document on screen, students can go through the text line by line and discuss how they translated every term, select and comment upon parts they found challenging or share successful strategies they found. This kind of collaborative work is typical in face-to-face courses and can be difficult and time consuming to recreate in asynchronous forums. Online conferencing thus offers a welcome return to a proven pedagogical practice.

If instructors do chose to include synchronous revision sessions, they should be sure to mention this clearly in the syllabus and draw attention to the benefits it will offer, which may attenuate student concern about the time commitment it will imply. In the introductory forum to an advanced translation course, one of my students wrote about her concerns about the time commitment and hassle of matching up with other students' schedules to do synchronous translation review:

> Knowing how long the discussions take, I am concerned about the amount of time we will also have to spend now meeting with others. It may be true that it simulates a true translation experience. However, right now, being in school, translation is not my only job, as I am sure is the case for many others. I have my own classes, am a TA and have two other jobs. … I am really concerned about trying to match up schedules all the time to 'meet' with others for class work.

Upon completing the course, this same student found her concerns about time management to be outweighed by the benefits derived from working with other students in a live discussion, as she wrote in a final discussion post: 'Finally, I just wanted to add that I am so grateful that we have the group discussions and peer-edits. I found it really helpful to discuss issues with others and to hear how others handled specific issues'.[1]

In other words, adding a synchronous component to what is primarily an asynchronous course can have tremendous benefits both in terms of morale and student learning. While translation is often considered an isolated activity, live interaction with other translators—whether at professional conferences, online training sessions, association meetings or simply consulting a colleague with a terminology question—is an important and frequently enjoyable aspect of the profession. Equipping them with the interpersonal skills built through synchronous discussion will help students learn the content of the course and prepare them to communicate effectively once in the field.

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[1] The author received express permission to include this student's comments anonymously.

4 Discussion and Conclusion

Student retention in online courses has been a growing concern for academic administrators. In an annual survey about online learning conducted by Allen and Seaman (2014), the number of administrators who believe student attrition to be a greater problem in online than in face-to-face classes jumped from 28.4% in 2009 to 40.6% in 2013 (p. 35). Student engagement is key to their persistence in online learning. In a review of the literature on student retention in online courses, Hart (2012) found a number of studies showing that students' sense of instructor willingness to meet their needs, social connectedness and peer and instructor support (among other aspects) have positive impacts on student retention. A demonstrated interest in student input will not only help meet students' professional needs but will also contribute to their success in the online environment.

A well-framed introductory forum can serve to establish all three of these aspects from the outset of a course, while simultaneously providing instructors with valuable information about student learning needs. Judicious use of synchronous and asynchronous discussion forums—with each interaction possessing a very clear purpose—can ensure students' sense of social connectedness and prove a valuable venue for peer and instructor support. Frequent reference to how an assessment or activity serves to meet course and professional goals will help instructors refrain from assigning busy work and show students the immediate value of the tasks they are being asked to complete. Focusing on the processes of learning—rather than on content alone—equips students with the metacognitive knowledge that will facilitate their entry and growth in the translation profession. Rather than starting with a textbook or series of activities and building a course around them, instructors can use backward course design to establish meaningful learning goals, develop evaluations and assessments to ensure these goals have been met, and then select the content and learning activities that make achievement of these goals possible.

English for special purposes is different from many other fields in its use of the methodology and activities that underlie the professional disciplines it serves (Dudley-Evans and St. John 1998). Quite in line with this, online translation courses locate students' professional formation in environments that closely resemble those in which they will work upon completing their training. While these translation courses are not necessarily teaching specialised English to lawyers, doctors or engineers, they are teaching translators how to write like credible members of those professions. More importantly, online translation courses can teach students the research skills and learning habits that will allow them to translate like disciplinary insiders with any document they choose to take on in their professional careers.

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