

Chapter 2

Second Language Teaching and Technology. An Overview

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This chapter, which is focused on second language approaches and the use of technology in language teaching, is divided in three sections. The first one is devoted to the latest approaches proposed in second language teaching by researchers and its main aim is to give a general overview of the methods proposed recently. The second section centres its attention in the teaching of the four skills that are learnt by second language learners with the intention of describing the implications of teaching language skills. And finally, the third section focuses on the role of technology in second language teaching, the most outstanding advances in this field and also gives some examples of the way technology has been implemented in higher education in second language teaching.

2.1 Recent Approaches in Second Language Teaching

Second language teaching (SLT), considered as instructed second language acquisition (SLA), can be divided into meaning-focused instruction (MFI) and form-focused instruction (FFI), depending on whether the emphasis is placed on meaning or on linguistic form (Loewen 2011).

The basic premises of MFI, also known as communication-focused instruction, consist in considering the L2 (second language) as a communication tool rather than as an object of study in itself. Communicative language teaching (Savignon 2005; Celce-Murcia 2007; Littlewood 2011, 2014; Richards 2005) and content-based instruction (Lyster 2007; Lyster and Ballinger 2011) are the main examples of MFI. Even though communication is the main focus in these approaches, linguistic

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forms are not entirely disregarded, and specific instruction is conducted during communicative activities.

Communicative language teaching (CLT) can be interpreted in different ways depending on who uses the term. Harmer (2007: 70) defined this approach as an *umbrella term*, which includes learning sequences aimed to develop students' ability to communicate. Such definition distinguishes CLT from other teaching methods that focus on learning "(...) bits of language just because they exist", without considering their use in real-life communication (Harmer 2007: 70). In the same line, Pham (2007) argued that language learning requires classroom activities to be real and meaningful to learners and that the primary goal in language learning is to be able to use the language effectively to communicate.

The concept of communicative competence in a second language, formulated in Canale and Swain (1980) and Canale (1983) remains the key source for discussions of its applications in second language teaching. Drawing upon the linguistic, sociolinguistic, strategic and discourse competence elaborated in Canale (1983), Celce-Murcia (2007) proposed a revised model of communicative competence. Discourse competence remains at the core of this model, and is interrelated with other competences: the sociocultural, understood as the speaker's pragmatic knowledge; the linguistic, interpreted as the knowledge of the language system; the formulaic, including the use of prefabricated chunks of language; the interactional, which involves actional, conversational and non-verbal competence; and finally, the strategic competence, consisting in acquiring communicative strategies.

There are many relevant implications of this model for second language teaching (Celce-Murcia 2007). Among the most significant is the incorporation of the knowledge about the target language culture into the language instruction, and of culture-oriented content in language activities for a more contextualized and motivating language learning. Teaching materials, in the author's view (Celce-Murcia 2007), should represent real discourse and thus help learners produce meaningful discourse by themselves. Moreover, classroom instruction ought to seek a balance between teaching language as a system and as a formula, and should also ensure that learners can experience the dynamic nature of genuine interaction in the target language. Finally, learning and communicative strategy training should be given additional attention in language courses.

In the same line, other authors insisted on the importance of communication and learner-centeredness in the classroom instruction (Richards and Rogers 2001; Wesche and Skehan 2002; Benson 2012). In the same vein, Littlewood (2011: 549) lists the following features of the communicative methodology as appropriate for the classroom practice: information sharing and transfer, cooperative learning, free practice, risk taking, communicative tasks as a basic organizing unit, the use of school subject matter, psycholinguistic processing, attention to appropriateness of the language use, and opportunities for students to focus on the learning process. Littlewood (2000, 2004, 2011) proposes an inclusive approach to CLT, incorporating both experiential and analytical aspects of language teaching and learning, denominated *communicative continuum*. This approach reflects how a cline from non-communicative learning to authentic communication, and thus from analytic to

experiential strategies can be achieved in the classroom in order to facilitate its acceptance by teachers.

Content-based language teaching (CBLT) is another example of meaning-focused instruction. In this approach, non-linguistic content is taught to students through a language that is not their first, in the way that they can learn both curricular content and an additional language (Lyster 2011). Content-based instruction takes place in a variety of contexts, including elementary, secondary, and university education, of which immersion programs and content and language integrated learning (CLIL) are the best-known examples (Dalton-Puffer 2007; Mehisto et al. 2008; Carrió-Pastor 2009).

CBLT has often been referred to as the *two for one* approach (Lightbown and Spada 2006), as learners in these programs learn subject matter and the target language at the same time. Despite this obvious advantage for the learners, much of researchers' concern has arisen from the separation between the two goals and an incidental attention paid to L2 (e.g. Swain 1985; Netten 1991; Lyster 1998; Fortune et al. 2008). As a result of the observational studies conducted, CBLT scholars called for language-rich and discourse-rich content-based instruction to increase its efficiency (e.g. Harley et al. 1990; Netten 1991; Swain 1988, 1996; Musumeci 1996; Duff 2001; Lyster 2007, 2011; Hoare and Kong 2008; Lyster and Ballinger 2011). Lyster (2011), for instance, proposed a counterbalanced instruction, integrating content-based and form-focused instruction, focusing on form/function relationships in the target language. The author lists a range of instructional options of the two approaches that should be delivered in the classroom context in a balanced way. Regarding the content-based instruction, Lyster (2011: 616) mentions: applying techniques to make the subject matter comprehensible to L2 learners, creating opportunities for students to use an L2 in order to mediate content learning during academic work, and finally, conducting verbal negotiation between teachers and students to ensure students' participation and appropriation of the targeted content. With reference to the form-focused instruction, Lyster (ibid) suggests introducing noticing and awareness tasks designed to make input features salient and easier to learn, production practice activities facilitating the proceduralization of target language knowledge, and finally, verbal negotiation between the teacher and students to stimulate progress in the process of target language learning. Lyster's (2011) proposal can be viewed as a response to the calls for a greater emphasis on language development in content-based instructional settings.

Form-focused instruction (FFI) was defined by Ellis (2001: 1–2) as “(...) any planned or incidental instructional activity that is intended to induce language learners to pay attention to linguistic form”, and was largely accepted and discussed in Housen and Pierrad (2005), Nassaji and Foto (2007), Spada and Lightbown (2008), Nassaji and Fotos (2011), and Spada (2011). Ellis (2001) divides FFI into three categories: focus on forms (FonFs) corresponding to traditional structural approaches in which isolated linguistic units are presented and practiced; incidental focus on form (FonF), involving brief and spontaneous attention to language items during communicative activities; and, planned FonF, consisting on attention to preselected language items during communicative activities. Loewen (2011) argues

that focus on form (FonF) either incidental or planned is beneficial for L2 pedagogy: it eliminates instructional activities that isolate linguistic items and separates them from a meaningful interaction. Moreover, it focuses on the accurate use of the language in the MFI contexts, which otherwise will remain unnoticed. Loewen (2011: 579) proposes a number of taxonomic categories of FonF, reflecting different classroom manifestations of this instructional approach. In general lines, a distinction is made between the extensive and intensive FonF. In the former, a variety of structures is paid limited attention, and in the latter, one or two linguistic items are targeted continually during an activity. Both types of FonF can be either reactive or proactive. In the reactive variety, the form can be focused on sporadically in response to students' errors. In the latter, the attention is paid to those language items, which are generally considered as problematic, even though no error has been produced. Within the extensive proactive FonF, Loewen distinguishes between a teacher-initiated option, that is when attention is drawn to a linguistic item by the teacher; and, a learner-initiated option, when students ask about a specific linguistic item that they consider as problematic.

In spite of critical opinions about FonF, pointing to its ineffectiveness, most researchers agree that FonF can be beneficial for L2 learners and should be incorporated into L2 teaching practices (Ellis 2002, 2006; Doughty 2003). A number of meta-analyses of instructed SLA showed that both FonF and FonFs were effective in L2 learning in their explicit rather than implicit form (e.g. Norris and Ortega 2000), and that one of the FonF forms: corrective feedback, was especially beneficial (Li 2010; Russell and Spada 2006). Against this background, Spada and Lightbown (2008) suggest that the current debate about FFI should not focus on whether it should be incorporated into CLT, but rather how it should be included and when. Other scholars (e.g. Long 2007), however, point out that FonF is not essential for L2 learning and that learning can occur in different situations depending on the learning needs and styles. For instance, Laufer (2005) considers that vocabulary can be taught both through FonF and FonFs.

In the discussion of the appropriate communicative context for FonF, in which an overall emphasis should be placed on meaning (Williams 2005; Ellis 2006), syllabi consisting of communicative tasks within which FonF can occur were suggested (Ellis 2003; Skehan 2003; Van den Branden 2006; Nassaji and Fotos 2011). In the same line, Spada and Lightbown (2008) proposed integrated FFI and isolated FFI. Within communicative language teaching or content-based activities, integrated FFI is incorporated into communicative activities, and isolated FFI takes place in lessons that are separated from communicative activities. Another related debate among FonF researchers is concerned with the degree of explicitness in approaching language forms in the classroom and in inducing learners' noticing of the forms. Some researchers called for implicit types of FonF to avoid disrupting the communicative flow of the activity (Doughty and Varela 1998; Long 2007). Others supported more explicit references to forms, as implicit FonF may not be salient to learners (Ellis et al. 2006). Recent studies have revealed that implicit feedback, such as recasts can be effective for L2 learning, but more explicit types of feedback can even be more successful (Ellis et al. 2006; Sheen 2007; Sauro 2009).

Apart from MFI and FFI approaches to L2 teaching, the analysis of written discourse and its impact on L2 pedagogy in recent years deserves a special mention here. Most of the research on applications of written discourse analysis has been conducted with regard to contrastive (or intercultural) rhetoric, corpus linguistics and genre analysis (Ferris 2011). Contrastive rhetoric (CR) has recently been considered as beneficial for both L2 writers and L2 teachers, despite the criticisms received for a too narrow approach in structural applications of CR to teaching L2 composition in previous years (Atkinson and Ramanathan 1995). Kaplan (2005), for instance, noted that CR helps teachers be aware of discourse differences across languages and understand the background knowledge, assumptions and practices that L2 students may use in the classroom. In the same line, Ferris and Hedgcock (2005) argued that this kind of awareness could only facilitate more effective teaching and learning. Ferris (2011) also pointed out that L2 writers are not a homogenous group of learners, and the differences in their linguistic background and learning experience may influence the CR impact and provide new insights into classroom practices.

Corpus linguistics and its usefulness in the language classroom have been questioned in recent years, as the question about usefulness of transforming empirical accounts of naturally occurring language and learner language into teaching materials has been a controversial issue (e.g. Conrad 2005). Ferris (2011) argues that there are philosophical and practical objections to the applications of corpus linguistics to L2 teaching. On the one hand, such applications may be viewed as the re-introduction of older pedagogy, especially of the *natural approach* (Krashen and Terrell 1983), but also as the incorporation of structural approaches, in which selected linguistic features are explicitly presented in sequences. On the other hand, the practical objections arise from the fact that L2 teachers need substantial training in formal linguistics, corpus linguistics and advanced statistics in order to be able to introduce corpus linguistics findings into the classroom. Despite these obstacles, corpus linguistics offers many advantages to L2 teaching. It has informed the development of a variety of L2 materials, such as dictionaries, grammar books, or language textbooks. Corpus-based studies of L2 student writing have also provided valuable information to existing research about L2 writers and their texts. Finally some researchers (Coxhead and Byrd 2007; Conrad 2005, 2008; Byrd and Bunting 2008; Granger 2009; Gilquin and Granger 2010) have argued for using corpus techniques in the classroom to allow students to observe language, be able to make generalizations and be aware of language patterns. Ferris (2011), however, points out that the definite incorporation of corpus techniques into the L2 classroom depends on the existence of corpus-based user-friendly materials.

Finally, genre analysis has been influential in the application of written discourse analysis to L2 teaching, especially in the area of English for Specific Purposes and English for Academic Purposes. Some scholars argued that students should be trained as *researchers* of various genres (e.g. Johns et al. 2006; Tardy and Courtney 2008). As it is impossible to teach students all possible genres that they are likely to encounter, it was suggested that students should be prepared to analyze genres and be ready to provide writing solutions for a variety of communicative situations.

Related to this idea is the issue of teaching genres not as static, but as dynamic and evolving forms. Ferris (2011) emphasizes that students benefit from the genre analysis applications in L2 pedagogy because they can gain a metacognitive awareness of the reality of genre in many communicative situations that they will encounter, and so they can understand the contextual factors that may influence their communicative success.

2.2 Recent Approaches to the Teaching of the Four L2 Skills

Key developments in the teaching of second languages took place in the 1990s and the 2000s as those times witnessed the emergence of new trends in the teaching of foreign languages, some of which have remained valid until the present moment. Taking all this into account, in this section, we will present an overview of the teaching of the four L2 foundational skills, i.e. speaking, listening, reading and writing. Our approach to the teaching of the four skills is based on the tenets of the communicative language teaching movement and on the consideration that instructional models should be of a multiskilled nature and have the development of the learner's communicative competence at its centre.

2.2.1 Teaching Speaking Skills

The teaching of speaking skills has been pointed out to be quite a complex and demanding task for learners from a cognitive point of view (Sze 1995; Ferris and Tagg 1996; Tarone 2005). Among the aspects that need to be achieved are accuracy, a good pragmalinguistic competence and the right lexicon to be able to successfully communicate. In fact, speaking a second language involves the production and integration of several other skills. In other words, speaking allows the expansion of the target language through the improvement of vocabulary, while it also requires paying attention to pronunciation, together with a good command of grammatical and discourse features.

In this vein, it has been argued that it is sometimes difficult to distinguish the skills of listening and speaking when they are involved in interaction (Nation 2011: 444). In spite of the fact that speaking has been considered a central skill in language use, a quick look at foreign language teaching methodologies or approaches reveals that speaking has been largely considered a minor skill. Therefore, it has been often relegated to a secondary place as it has been wrongly believed that speaking could not be properly developed until learners had built up a considerable knowledge of the target language and its system mainly through large quantities of comprehensible listening input (Nord 1980).

Recent research on second language speaking carried out by Nation (2011: 444–445) shows that the teaching of speaking skills should be done through “(…) a balance of opportunities for learning across the four strands of meaning-focused input, meaning-focused output, language-focused learning, and fluency development”. Thus, opportunities for meaning-focused input will need to be complemented by opportunities for meaning-focused output (cf. Swain 2005) and the deliberate attention to pronunciation, the deliberate learning of vocabulary and multiword units, accuracy and fluency, as well as a communicative competence. In this respect, communicative and task-based approaches to the L2 teaching of speaking skills have resulted in the improvement of certain aspects of L2 oral production (i.e. the use of carefully designed tasks such as narratives and descriptions to foster grammatical and lexical complexity, or the use of task repetition or rehearsal of content has led to improvements in accuracy and fluency at all levels). Likewise, the focus has shifted to the teaching of clausal grammatical constructions as the only way to provide accurate grammatical models for spoken language (Biber and Conrad 2009) and studies of large English corpora have been key in analyzing the features which differentiate oral/written, and formal/informal discourses. What is more, present pedagogy on L2 speaking has largely incorporated a wide range of strategies to achieve effective communication, to effectively organise discourse, (i.e. conversational routines, speech-acts, etc.), that have helped learners improve their pragmalinguistic skills.

The deliberate attention to pronunciation can result in the improvement of the quality of spoken output. However, the focus of pronunciation has shifted to place the emphasis on intelligibility rather than pursuing nativelike accents (McKay 2002; Tarone 2005). In any case, the deliberate teaching of pronunciation needs to be complemented by a focus on the learning of vocabulary and multiword units (lexicon), and on the discourse strategies.

2.2.2 *Teaching Listening Skills*

Listening is “(…) perhaps the most essential skill for second/foreign (L2) language learning” (Vandegrift 2011: 455) and quite a complex cognitive skill as learners have to decode the linguistic input through a bottom-up process while activating top-down knowledge, that is their contextual and prior knowledge of cultural constructs, topic familiarity, discourse clues and pragmatic conventions (Mendelsohn 1994; Celce-Murcia 1995, among others) in order to build a conceptual framework for interpretation. Both processes need to be judiciously intertwined for a successful listening outcome, depending on the purpose of the activity, the context of the event and the peculiarities of the listener (Vandegrift 2011).

Current perspectives on the teaching of listening skills have mainly focused on two complementary approaches: one which contemplates the teaching of listening from a multi-skilled perspective (listening, discourse and linguistic skills) and another which focuses on metacognitive knowledge, that is, the learners’

knowledge about listening (Goh 2008). The first approach views the listening experience as an opportunity to focus learners' attention on the morphosyntax, lexicon and phonological variables as well as to expand their knowledge of sociocultural and pragmatic norms. The second one draws attention to the necessary and explicit teaching of key metacognitive strategies for L2 instruction as pointed out by Rost (2005), such as planning, self-monitoring of the comprehension process, evaluation of comprehension, identification of problems, discourse organization, elaboration and making inferences, etc.

In this vein, current bodies of pedagogy propose a necessary interaction between the variables of the listener, the task and the context with the listening process quality to help L2 listeners regulate and achieve a greater awareness of the listening process. This new approach shifts the focus away from what has been the traditional product of listening, i.e., obtaining the correct answer, and thus gives way to an opening body of research which is more concerned with the process approach to the teaching of L2 listening. This new pedagogical approach argues, "(...) an emphasis on the process of listening through regular classroom practice, unencumbered by the threat of evaluation, can better enable L2 listeners to control comprehension processes on their own" (Vandergrift 2011: 464).

2.2.3 Teaching Reading Skills

The interest in the processes for the teaching of L2 reading skills have emphasized the necessary interplay of both top-down and bottom-up cognitive processing, together with the activation of the learner's schemata and prior L2 knowledge as a pre-condition for the successful development of L2 reading skills. Learning to read in an L2 involves, as was the case with the previous skills discussed, other sub-skills since learners need to identify and process words and their meanings, identify the spelling system (phonological aspects) and the meaning of larger units, such as sentences, texts, etc. However, the focus on bottom-up processes as key for the development of reading skills has brought about a change in the pedagogical approach to these skills for both young and adult learners. In fact, authors such as McKay (1993), Nunan (1999, 2003), Celce-Murcia (2001), Carter and Nunan (2001), and Wallace (2001), among others, have emphasized the importance of initial instruction in bottom-up strategies to achieve the reading fundamentals (word and sound recognition) before approaching top-down strategies (cf. Birch 2002; Koda 2005). As many authors have also advocated "(...) knowledge of the language of the text" (Eskey 1988: 96) is of key importance for a successful outcome, especially because an L1-to-L2 transfer of reading skills and schema does not always occur. Recent research on the teaching of this skill has also highlighted the relationship between a specific reading literacy and vocabulary knowledge (cf. Nation 1990, 2001; Hu and Nation 2000), which has significantly influenced the body of research on vocabulary teaching.

2.2.4 Teaching Writing Skills

The current body of studies on the teaching of writing skills advocates the integration of explicit grammar and vocabulary teaching within L2 writing instruction (cf. Martin 1992; Christie 1998; Celce-Murcia 2001). This new view stands in stark opposition to traditional views which considered that comprehensible input was enough for successful achievement of writing abilities. Current L2 writing pedagogy has also demystified the belief that a mere transfer of L1 writing abilities will render successful L2 writers.

The field has especially benefitted from research into the teaching of writing and reading from a systemic functional perspective, which pays attention to genre based instruction, although this has also attracted certain controversy. In any event, the integration of bottom-up and top-down skills seems to lie at the core of writing instruction.

2.3 The Implementation of Technology as a Tool in Second Language Teaching

After the description of the recent approaches in second language teaching and specifically, their application to the four language skills, a third section focused on the use of technology in second language teaching has been included in this chapter. Three sub-sections have been included in this section: the first one deals with the definition of technology when is applied to second language teaching. The second sub-section classifies the tools that may be used to enhance second language teaching and finally the last sub-section explains the potential of the use of technology in this field.

2.3.1 Definition of the Concept Technology in Second Language Teaching

Having reflected on the role, implications and recent approaches in second language teaching and the way the four language skills are taught nowadays, we can now turn to the key concept of this book: the implications and role of technology. The word *technology* is used in diverse contexts and can be interpreted in different ways depending on the area of knowledge (i.e. computing, nanotechnology, linguistics, didactics, etc.). In the first section of this chapter, it has been described that more emphasis on content and meaning is put in the different approaches to second language teaching. In this sense, technology communicates the improvement of content, knowledge, new tool generations and data processing, i.e. the use of the information and knowledge era to teach a second language. Nevertheless, before

reading this section, teachers should ask themselves, what does technology mean? Does it mean the World Wide Web? Does it mean computers? Does it mean innovation? Does it mean the use of technological tools?

In order to answer all these questions, it should be considered the changes that communication and knowledge transmission have undergone. Some authors Warschauer and Meskill (2000) consider that the methods used in the 1970s and 1980s also employed technology, e.g. the use of blackboards, overhead projectors, audio-tapes or recorders. However, the concept of technology now means the Internet, personal computers and smartphones. Some years ago, the term *new technologies* was used, but we believe the adjective *new* should now be considered an old fashioned term. It should be used the term technology as a global concept that incorporates all the different advances in this broad area. Technology is not new anymore; it is a phenomenon we are used to in this machine-dominated society. We communicate by sending text messages or e-mails or via Internet-based software as Skype, personal blogs, Facebook, Twitter etc.; i.e. it is possible to be at home physically alone and yet to communicate virtually with millions of people at the same time through social networks.

All these changes in communication have led to a revolution in language teaching. The traditional teaching methods or approaches (i.e. Translation method, The silent way, Suggestopedia, etc.) are seldom used and schools and universities provide platforms to teachers and students to implement content based instruction and the communicative approach as can be seen in the research presented by Chan et al. (2011), Wang and Smith (2013), and Aydin and Yildiz (2014) and it has also been mentioned in the first sub-section of this chapter. It may be considered that there is no way back: the revolution in language teaching has already happened. While content teaching has evolved and changed, second language teaching is also experiencing its own revolution with regard to how a language can be learnt and practiced. Students can use the Internet to do exercises, write essays that can be corrected by teachers online and they can even talk in a second life platform to native speakers. This is a true revolution when we compare this with the second language teaching of 50 years ago.

Focusing on outcomes more than on input, most of the research in this area has demonstrated the ability of technology to provide an arena for natural, meaningful, and realistic language learning (Zhao 2003; Chapelle 2004; Yang and Chen 2007; Levy 2009; Oxford and Oxford 2009; Collentine 2009; Kennedy and Miceli 2010; Chapelle 2010; Chen 2011). Some of the advantages reported are that language learners who are engaged in computer-mediated communication tend to produce more language than they did in face-to-face discussions. This way of teaching is based on the learner-initiated option explained in the first section of this chapter (Loewen 2011). In addition, participation appears to be more equal across learner populations: the discussion is not dominated by a small number of students, as often occurs in the regular classroom. This may be due to the reduction of contextual social cues and nonverbal cues that tend to inhibit participation. There is also a greater ratio of student talk to teacher talk and the four skills, described in the previous sub-section, can be practised. Furthermore, researchers cite a marked

increase in cultural awareness on the part of students (Zhao 1996; Salaberry 1996; Ortega 1997; Warschauer 1997; Singhal 1998; Warschauer and Healey 1998; Gray and Stockwell 1998; Liu et al. 2002) and a focus on contrastive rhetoric applied to language teaching (Kaplan 2005).

A review of the research carried out reveals that today we have a large set of technologies available to us for the improvement of second language learning and the teaching of speaking, listening, reading and writing skills. Nevertheless, their potential cannot be fully realized unless we reconsider how we conceptualize and design technologies which support second language teaching as Lai (2013) and Lin et al. (2013) explain in their research, to cite some authors that refer to technology used for second language learning. We should look to design second language teaching programmes which are enhanced by technology, rather than individual items of software that have insignificant impact on language acquisition. Teachers should draw on the resources of technology to provide high quality input and use technology to enable learners to integrate their individual language knowledge, the specific content and skills they are interested in and their communicative interests.

The advantages and disadvantages of the use of technology in second language learning have been widely discussed for almost 50 years (Wyatt 1983; Warschauer 1996; Warschauer and Meskill 2000; Chapelle 2004; Wang 2005; Nunan 2010; Riasati et al. 2012) and these studies have also shown that most researchers have paid attention to the output of language learning more than to the input.

In this chapter, we argue that the role of technology in second language teaching is also of current importance and should be complemented with the recent approaches of language teaching. Technology opens many activities up to self-study; nevertheless teachers should be conscious that the use of technology does not result in language learning per se as pointed out in the second section in this book. The appropriate use of technology in second language teaching requires significant knowledge of the recent language approaches described in the first section of this chapter, course planning and strategies to motivate students, as it is explained in the different chapters of the second section in this book. Technological tools offer many possibilities to second language teachers and to the teaching of the four skills of languages, but teachers should include a variety of activities in their syllabus in order to avoid the overuse of these tools. The approach behind the use of technology should also be stated by teachers in order to stimulate and plan the outcomes of learners in the proposed activities; i.e. teachers should emphasise the approach taken into account, e.g. content based language teaching, form-focused instruction, contrastive rhetoric, corpus linguistics, etc. In the different sections of this book, it is considered that research should focus more on the input processing and enhancement than on the output of second language teaching.

At this point, we do not focus on the outcomes of language teaching as research on language learning does, but rather on the methods and approaches that can be employed through the use of technology. As part of this, we propose the concept of Technology Assisted Language Teaching (TALT), as we consider this to be a new perspective that highlights the role of teaching methods and teachers in the improvement of second language learning. We believe TALT should be applied

to the recent approaches in second language learning. This concept derives from the view that we should now refer to technology, rather than computers or the Internet, as the tools that we now have to communicate and teach are based on a wider range of technology. The computer (referring to it as the object) is not the most frequently used medium with which to communicate nowadays, with other handheld devices such as tablets or smartphones being more widely used due to their ease of use when compared with a PC. This is why in this book we refer to technology in a broad sense. It comprises all the resources that can be used nowadays to enhance second language teaching and, as a consequence, tools are mentioned because they are technologically significant in some way although a greater focus is placed on the resources available to teachers than on the tools with which these resources can be used. As can be seen, some chapters of this book refer to the use of social networks, corpus analysis, virtual learning platforms, digital portfolios, etc.

2.3.2 Classification of the Tools Used in Second Language Teaching

Having defined the central concept of this chapter, we can now enumerate and classify the technology that may be used nowadays to enhance second language teaching and the implementation of teaching methodologies. The tools used for teaching purposes can be classified in different ways, although the most common classifications are made in terms of the technology (software tools) used or their functions in teaching.

On the one hand, from the point of view of the software tools used in language teaching (adapted from Conole 2004), the following categorization of technology can be proposed:

1. Tools for manipulating text and data: word processing.
2. Tools for presentation and dissemination: the web and PowerPoint.
3. Tools for analysing data: SPSS and language processing systems.
4. Tools for information seeking and handling: search engines, portals.
5. Tools for storing and managing information: databases, digital books and journals.
6. Tools for personal management: diaries and to do lists.
7. Tools for Communications: e-mail, discussion forums and messaging services.
8. Tools for evaluation and assessment: tracking tools.

On the other hand, a range of classifications of technology can be made in terms of its function in second language teaching. We have selected two classifications that we consider to be the most appropriate to teaching a second language. A good example of such a classification of technology for the teaching of a second language is that of Laurillard (2002), who took into account the teaching strategies and the tools used in language teaching:

1. Narrative: lectures, e-books, audio and video.
2. Interactive: web, blogs, and social networks.
3. Adaptive: simulations and tutorials.
4. Communicative: text, audio, video conferencing, discussion, Skype.
5. Productive: intranet.

However, it is the classification proposed by Bostock (1996, 2007) which seems to be the most appropriate to second language teaching and the best adapted to the technology based activities performed by second language teachers. We have adapted this classification by taking into account the educational function of technology and instruction based on sociocultural principles:

1. Information resources (content but no processing, user control): databases, hypermedia, recording, videos, e-books, e-journals, Dropbox, iCloud, and the World Wide Web.
2. Information processing tools (processing but no content, user control): word processors, concept mappers, etc.
3. Simulations (content and processing, user control): games, models and virtual environments.
4. Technology aided instruction (content and instructional processing, software control): substitute tutors and testers, tutorials and assessment, intranet, etc.
5. Technology mediated communications (content-free, processing-free, user control): personal communication media, e-mail, messaging services, forums, blogs, wikis, social networks, etc.

Bostock's (1996, 2007) classification seems to cover most of the possibilities for the use of technology in second language teaching. Second language teachers should consider the possibility to include most of the tools in their syllabus to create an e-learning environment. We do not propose that teachers should choose one of the two classifications put forward here, as they represent different perspectives on the same phenomenon: the use of technology in second language teaching. We propose one of these classifications to be combined with the approaches described in the first section of this chapter.

Nevertheless, we should remember that the quality of what is done with the tools is more important than the technology itself. The use of technology is not enough: teachers must motivate students and ensure that they receive feedback on the activities proposed. Furthermore, the activities should be integrative, by taking into account the speaking, listening, reading and writing skills that students need to practise to improve language acquisition.

2.3.3 The Potential of the Use of Technology in Second Language Teaching

Apart from emphasizing the importance of the use of technology in second language teaching, we would also like to highlight the necessity of applying sound pedagogical principles and language acquisition theories when developing specific uses of technology. Chapelle (1997, 2004) proposed grounding Computer Assisted Language Learning (CALL) research and development in interactionist second language learning theory, even suggesting that technology could be seen as a participant in the facilitation of communication and that language research should describe the interaction between technology and learners. However, the focus at present is not on whether teachers can use technology in language teaching. Rather, research is now centred on the importance of a well-articulated curricular framework with which to structure and guide the development of an effective system that can combine the use of technology and second language approaches in an effective way. If the use of technology in second language learning can be provided with a sound theoretical basis, then researchers can investigate whether the use of technology can lead to a whole new approach, instead of the technology simply being a tool with which to apply an established approach.

Another issue to take into account before describing the potential of the use of technology in second language learning is the role of teachers. Teachers should be trained in the use of technology and be made more aware of the software available. Teachers should be trained to find information on the World Wide Web and to make use of information technologies, especially networked computers. Through e-mail, mailing lists, discussion groups, and chat rooms, the Internet has increased the opportunities available for communication in a second language with both native and non-native speakers. In this sense, teachers should be conscious of these possibilities and take advantage to improve second language acquisition.

Several researchers such as Chapelle (1997, 2004, 2010), Warschauer and Meskill (2000), Reparaz et al. (2000), Chen (2011), and Rüschoff (this volume) have highlighted in their research the potential of the use of technology in second language teaching. The successful project-oriented learning that integrates the use of authentic materials through technology and second language learning has been adopted by many teachers in higher education as a way to implement real contexts in their classes. Technology has also opened up fantastic opportunities for communication with people from different cultures. For instance, the Internet provides a worldwide learning environment that makes communication over long distances fast and affordable. The use of the Internet enables cross-cultural cooperative groups to be built up with the application of a language awareness-intercultural approach.

Similarly, if the importance of the communicative and cognitive second language teaching model and the sociocultural theory are sufficiently recognised, then the use of technology will have a solid theoretical basis, as explained in the first section of this chapter. Furthermore, the use of technology in second language

learning should go beyond attitudes, vocabulary acquisition, language production and the practice of content and linguistic structures. For example, more applications of technology should be conducted in the less explored areas of culture and society, i.e. the sociocultural aspects of language. Language teaching is a multifaceted social and cultural phenomenon (Kern and Warschauer 2000) and technology can enhance social interactions, for which teachers should provide guidance. The role of teachers is crucial in technology-supported interactions, as they should guide learners through the process and show them the benefits of peer-to-peer communication in a second language. The use of technology is important in second language teaching, but teachers are the key aspect of the pedagogical design of instructional activities, as described earlier.

Thus, nowadays language teachers should not focus so much on teaching grammar rules and vocabulary, but rather they should help students to communicate with international web surfers using intercultural communication as Jauregui shows in this volume. Teachers should plan their syllabus carefully in order to integrate second language teaching, technology implementation and the sociocultural implications of this interactive environment. The right atmosphere should be created in order to obtain the best opportunities for authentic and meaningful interaction, which can be practised inside and outside of the classroom.

In short, the quality of what is done with technology is more important than the use of technology per se. A badly conceived interactive activity is poor whether it is done on a computer or face-to-face. This fact can easily be avoided if technology is used with the adequate approaches as indicated in this chapter. Furthermore, in Parts II and III of this book, several examples are given of the way teachers and trainers apply technology to second language teaching and translators' training. Technology enhances second language teaching but using technology is not enough. In order to promote successful learning, a second language teaching syllabus that makes use of technology must be meaningful, have a true interactional component, and have a comprehensible purpose for the language student (Chapelle 1997; Warschauer and Healey 1998; Liu et al. 2002).

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