

UNIVERSIDADE DE LISBOA

FACULDADE DE LETRAS



**Multiple literacies and Web 2.0
in the English as a Foreign Language classroom**

Silene Cardoso

Dissertação orientada pela Prof.^a Doutora Lili Cavaleiro e
coorientada pelo Prof. Doutor Carlos A. M. Gouveia, especialmente
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Resumo

As inovações tecnológicas têm transformado a sociedade contemporânea de diversas formas ao longo dos últimos 50 anos. A expansão da Internet, nesse sentido, é responsável por alterar, especialmente, a forma como as pessoas se comunicam, interagem e se relacionam umas com as outras. Como consequência, é possível ver mudanças principalmente em três esferas sociais: na vida profissional, na vida pública e na vida privada (Cope & Kalantiz, 2000).

Essas mudanças também afetaram (ou pelo menos deveriam ter afetado) a educação e o conceito de literacia, já que não é mais possível considerá-los da mesma forma que eram pensados há vinte ou mesmo há dez anos. Conseqüentemente, há cerca de vinte e cinco anos esse tema tem chamado a atenção de muitos pesquisadores (por exemplo, Bezemer & Kress, 2016; Cope & Kalantiz, 2000, 2008, 2009, 2014; Kress, 2003, 2005; Kress & Jewitt, 2003), que têm se preocupado com o papel da escola e da educação na sociedade contemporânea. A necessidade e a possibilidade de estabelecer novas definições para o que significa literacia nesta sociedade em constante mudança estão em foco já há algum tempo em diversas áreas do conhecimento.

Nesse sentido, aprender a ler e a escrever (o sentido mais tradicional de literacia) ganhou novas perspectivas, e hoje para poder tornar-se leitor e produtor de sentidos são necessárias competências adicionais que vão além de dominar o código linguístico. É essencial também aprender como os diferentes modos semióticos (imagens, cor, sons, gestos) são articulados para comunicar diferentes mensagens em diferentes plataformas, na página impressa ou no monitor. Diante desse facto, a Internet trouxe ainda mais desafios, e comunicar utilizando os diferentes meios que a web proporciona exige o desenvolvimento de competências ligadas ao ambiente digital.

A escola, como sendo o local onde a educação formal ocorre, não pode mais ignorar as novas tecnologias em sua realidade; mas, apesar de ser possível observar a introdução de aplicativos e outras tecnologias no contexto escolar, a abordagem a textos multimodais (aqueles compostos não apenas pela língua escrita ou oral, mas também por imagens, sons, e movimento) em ambientes digitais, assim como uma integração efetiva dessas ferramentas com os objetivos de aprendizagem, parece ainda precisar de investigações e pesquisas adicionais.

O ensino de línguas, de modo geral, e o de inglês como língua estrangeira, em particular, parecem muito beneficiar-se dos avanços tecnológicos, especialmente no que se

refere à interatividade e mobilidade que a expansão da Internet proporcionou. As novas tecnologias, nesse âmbito, parecem contribuir para o desenvolvimento das habilidades linguísticas e também das multiliteracias relacionados com esse mundo digital, incluindo sobretudo, as literacias multimodal, crítica e digital.

Considerando esse cenário, parece ser cada vez mais necessário investigar se as novas tecnologias são usadas nas aulas de inglês como língua estrangeira e de que maneira elas são utilizadas e até que ponto elas contribuem para o processo de ensino-aprendizagem. Consequentemente, as impressões e opiniões dos professores em relação ao uso das ferramentas digitais nas aulas é de grande importância.

Por questionário dirigido a professores do 3º Ciclo do Ensino Básico e do Ensino Secundário, investigou-se como as novas tecnologias, em especial a Web 2.0, são utilizadas nas aulas de inglês destes ciclos de ensino em Portugal.

O questionário foi criado na plataforma online www.freeonlinesurveys.com e distribuído digitalmente, por email e compartilhamento em redes sociais, a professores de inglês dos referidos ciclos de estudos. Durante o período em que ficou disponível, entre 7 de fevereiro e 30 de março de 2017, foram recebidas 132 respostas válidas, as quais foram tratadas de forma anônima.

O questionário estava organizado em três partes e era composto por dezasseis perguntas fechadas, entre perguntas de escolha única, de múltipla escolha, de ordenação de elementos e escalas de Likert. A primeira parte, composta pelas perguntas de um a cinco, pretendia estabelecer os dados demográficos e, assim, traçar um perfil dos professores que participaram da pesquisa. As perguntas de seis a dez pretendiam verificar os materiais, recursos e seus usos na sala de aula. A terceira parte era composta pelas perguntas de onze a dezasseis e enfocava o uso propriamente dito da tecnologia nas aulas desses professores.

Foi possível determinar que a maioria dos professores que responderam ao questionário tem entre 41 e 60 anos de idade, leciona nas regiões de Lisboa e Setúbal ou na região Entre o Douro e o Minho. Além disso, para lecionar inglês, a maioria concluiu o Ramo de Formação Educacional e quase metade do número total dos respondentes atualmente leciona em ambos os ciclos de estudo. No que se refere aos recursos que têm disponível na escola e na sala de aula de aula, itens como projetores, computadores e Internet são os mais comuns.

Foi também possível verificar que os materiais de áudio e vídeo, os manuais didáticos e a Internet para uso geral são os recursos mais utilizados pelos professores. Além disso, a maioria desses professores afirmou que em geral abordam outros modos semióticos nos textos

que trabalham com seus alunos e que procuram adotar ainda uma abordagem de multiliteracias, tendendo assim a concordar ainda sobre a importância de abordar os textos de forma crítica com seus alunos. Entretanto, pela própria natureza da metodologia adotada neste trabalho, não está claro de que forma esses professores adotam a abordagem multimodal e de multiliteracias na sala de aula.

Os professores que participaram da pesquisa tendem a utilizar as ferramentas da Web 2.0 em suas aulas e muitos deles acreditam que essas tecnologias são úteis no desenvolvimento das habilidades linguísticas. De acordo com as respostas obtidas, a tecnologia auxilia mais no desenvolvimento das habilidades de oralidade e escuta. Por outro lado, a escrita parece ser a habilidade menos trabalhada por meio da tecnologia. De qualquer forma, não está claro se os recursos digitais indicados, mesmo para o desenvolvimento das habilidades orais e auditivas, são de fato utilizados de forma mais inovadora ou apenas como uma forma mais moderna de aplicar métodos mais tradicionais. De forma semelhante, apesar de muitos desses professores terem indicado que as tecnologias auxiliam uma abordagem multimodal e de multiliteracias, assim como no trabalho interdisciplinar e de aspectos culturais, não foi possível determinar se de fato adotam essas posturas ao lidar com textos digitais. Sendo assim, pesquisas adicionais são necessárias para estabelecer os detalhes do modo como as tecnologias são de fato utilizadas na sala de aula.

Apesar de a maioria desses professores indicar que o uso de recursos digitais e da tecnologia na sala de aula demanda tempo e trabalho adicionais, eles tendem a reconhecer que as vantagens ainda são maiores do que esses obstáculos de tempo e de carga de trabalho. Nesse sentido, e com base nas respostas obtidas, pode-se dizer que o treinamento de professores para uma melhor utilização da tecnologia na sala de aula, assim como a criação de recursos digitais que atendam melhor às suas necessidades parecem ser elementos necessários para proporcionar uma melhor integração da Web 2.0 com os objetivos de aprendizagem.

Concluindo, apesar deste ser um estudo descritivo, e considerando o fato de que o limitado número de respostas obtidas não pretenda representar as opiniões do conjunto de professores de inglês do terceiro ciclo e do secundário, espera-se que os dados obtidos e os comentários apresentados possam indicar algumas tendências e, assim, contribuir de alguma forma para pesquisas futuras.

Palavras-chave: tecnologia e Web 2.0, multiliteracias, literacias digitais, literacia multimodal, ensino de língua inglesa

Abstract

Innovations in technology have deeply changed the way people communicate, interact, and relate with each other. In view of this, over the past twenty-five years, many scholars and researchers (e.g., Bezemer. & Kress, 2016; Cope, Kalantiz, 2000, 2008, 2009, 2014; Kress, 2003, 2005; Kress & Jewitt, 2003) have demonstrated concerns on the role of the school and education in this technological society. The Internet has posed additional challenges; and communicating through this global network also demands competences that go beyond written or verbal language. Although the use of technology in education seems to be a reality in many contexts, the approach to different multimodal texts (the ones composed not only of written language, but also of images, sounds, and movement) in online environments, and a consistent integration of technology and learning objectives require further investigation.

Bearing this in mind, this study aims to provide a general overview of the use of new technologies, more specifically, of the Web 2.0, in English as a Foreign Language (EFL) classrooms of the third cycle of basic education (Years 7 to 9) and secondary education (Years 10 to 12) in Portugal. In order to do so, this dissertation begins by providing a theoretical background, a definition of the Web 2.0 and its implications for language learning and EFL teaching, followed by a discussion of some documents and initiatives published by the European Union and Portuguese government concerning digital competences and the use of technology for education and language learning. Additionally, research was conducted by means of an online questionnaire on the use of the Web 2.0 in EFL classrooms.

The questionnaire was sent to EFL teachers of the abovementioned educational levels and was made available from February 7th to March 31st, 2017. During this period 132 valid responses were received. Based on the answers provided, it can be assumed that among this group of teachers, new technologies tend to be part of their professional practice. However, it is unclear if digital tools have been used to actually promote more innovative ways of teaching or just as a different way to approach more traditional methods. Moreover, it seems that training and further development of suitable materials is required to facilitate and better integrate new technologies in the classroom.

Keywords: Technology and Web 2.0, Multiliteracies, Digital literacies, Multimodal literacy, English language teaching

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List of Abbreviations

ACTFL	American Council on the Teaching of Foreign Languages
ANPRI	National Association of Informatics Teachers
APPI	Associação Portuguesa de Professores de Inglês
CMC	Computer-Mediated Communication
CALL	Computer-Assisted Language Learning
CLIL	Content and Language Integrated Learning
DGE	Directorate-General for Education (Direção Geral da Educação)
DGES	Directorate-General for Higher Education (Direção Geral de Ensino Superior)
DESI	Digital Economy & Society Index
EC	European Commission
EU	European Union
EFT	English as a foreign language
ELT	English Language Teaching
ICT	Information and Communication Technology

Introduction

It is widely acknowledged that innovations in technology have changed societies in many and different ways over the past fifty years. The global spread of the Internet has especially transformed the way people communicate, interact, and relate to each other. As a consequence, it has deeply altered working lives, public lives, and private lives (Cope & Kalantzis, 2000).

Considering this scenario, it is no longer possible to think about education and literacy as it was thought twenty or even ten years ago. Thus, over the past twenty-five years, many scholars and researchers (e.g. Bezemer & Kress, 2016; Cope & Kalantzis, 2000, 2008, 2009, 2014; Kress, 2003, 2005; Kress & Jewitt, 2003) have demonstrated concerns about the role of school and education. These concerns are related especially to the concepts of ‘literacy’ and ‘to be literate’: what do literacy and to be literate mean in this technological fast-paced society in which knowledge has a central role?

Learning how to read and write has gained different perspectives and, consequently, students are required to develop different competences in order to become literate. Not only is it essential to learn the formal written language, but it is also crucial to learn how other modes of meaning (images, sounds, gestures, colors) are articulated in order to convey a message on different platforms, on the page or screen. The Internet, in this sense, has posed additional challenges, and to communicate through this global network, competences linked to the specificities of the online environment are also necessary.

A milestone in the research towards a pedagogy of multiliteracies is undoubtedly the works that have been developed by a group of researchers called the New London Group (which included Courtney Cazden, Bill Cope, Norman Fairclough, James Gee, Mary Kalantzis, Gunther Kress, Carmen Luke, Sarah Michaels, Martin Nakata) that first met in 1994 to discuss the role of literacy and learning in contemporary societies. After almost twenty-five years and the massive development of technology, it is possible to see significant advances in education; however, it seems that the traditional concept of literacy (simply the ability to read and write, and count) has not changed considerably in schools.

In this sense, although the use of technology in education seems to be a reality in many contexts, the approach to different multimodal texts (the ones composed not only of written or oral language, but also of images, sounds, and movement) in online environments, and a consistent integration between technology and learning objectives seem to require further research.

Language teaching, in general, and more particularly the teaching of English as a foreign language (EFL), appear to have greatly benefited from the advances in technology, especially regarding interactivity and mobility that the expansion of the Internet brought about. New technologies, in this respect, seem to have a positive impact on improving language skills as well as on the development of multiple literacies related to the use of those technologies, including, particularly, multimodal and critical literacies.

Bearing this in mind, it seems increasingly necessary to investigate if and how digital technologies have been used in the EFL classrooms and to what extent digital tools contribute to the teaching-learning process. Consequently, teachers' impressions and attitudes towards their use of these new technologies in their lessons are of great importance.

In this sense, this study aims to investigate how new technologies, and especially the Web 2.0, are explored in English classrooms of the third cycle of basic education (Years 7 to 9) and secondary education (Years 10 to 12) in Portugal; therefore, the study will try to answer the following questions:

1. Have new technologies, and more specifically the Web 2.0, been used in English classrooms of the third cycle and secondary education in Portugal?
2. If so, how have these technologies been used?
 - a. Have they been used in a way that promotes a multimodal and multiliteracies approach?
 - b. Have teachers considered them helpful in improving language skills and meeting the learning objectives?

Furthermore, it is possible to establish the following objectives for this research:

1. To analyze how technology, and more specifically the Web 2.0, has been used in English classrooms.
2. To analyze if and how technological tools have been used to develop a multimodal and multiliteracies approach.
3. To verify if technology is considered useful to develop language skills and how.

In order to meet the objectives and answer the research questions, the methodology applied in this study involves the collection of data through an online questionnaire targeting English teachers of the educational levels mentioned. This questionnaire basically consists of checklists, multiple-choice responses, ranking questions, and Likert scales with the aim to investigate teachers' impressions on the use of technology and how they tend to use digital

tools in their lessons. Therefore, this study is organized into five chapters which are briefly described below.

Chapter 1 provides an overview of the key-concepts and theories related to learning practices in contemporary societies on which the present study relies on, namely: multimodality, multiliteracies, critical literacy and digital literacies. The role of English language teaching in the fast-paced technological society is also discussed.

In Chapter 2, a definition of the Web 2.0 and a description of digital tools and their relation to education are presented. Additionally, the implications of the Web 2.0 for foreign language teaching are briefly discussed. Therefore, this chapter aims to further discuss the theoretical background more closely related to the use of the Web 2.0 in education, particularly in foreign language learning, and the digital literacies involved.

Aiming to provide an overview of the initiatives and proposals concerning digital competences in the European Union (EU) and in Portugal, Chapter 3 considers some documents issued by the European Commission (EC) (namely DigComp 1.0, 2.0 and 2.1; DigCompOrg; and the chapters on Computer-Assisted Language Learning [CALL] of a report entitled *Improving the effectiveness of language learning: CLIL [Content and Language Integrated Learning] and computer assisted language learning*). The INCoDe.2030 initiative, proposed by the Portuguese government and concerning digital literacies, is also discussed along with the English syllabi for the third cycle and secondary education.

After providing the theoretical background and discussing some of the frameworks and initiatives in the EU and in Portugal, Chapter 4 details the methodology applied in this research, including: the reasons for the study; the research questions and its objectives, as aforementioned; the research context and its rationale; and the presentation and discussion of the online survey sent to teachers.

Finally, Chapter 5 presents and discusses the results from the online questionnaire in light of the theories and the documents presented in Chapters 1 to 3. Although the data collected do not intend to represent the total teacher population of the third cycle and secondary education, it is expected that the results and the conclusions drawn may indicate some tendencies in the use of technology in EFL classrooms in Portugal and can contribute to developing further studies in the future.

Chapter 1

Communication, society, and learning

Contemporary societies have been going through different major transformations in many spheres over the last fifty years, at least. Changes in economy and technology have greatly impacted human lives in many ways. Considering that discourses are “socially constructed knowledges of (some aspect of) reality” (Kress & Van Leeuwen, 2001, p. 4) – which means that they develop in specific social contexts – language and communication have also been highly affected by all the changes occurring in society. Technological development, in particular, has brought not only new ways of thinking about the world and new ways of interacting in society, but also, and no less importantly, new ways of making meaning and of communicating.

In the face of such changes, there has been an increasing need to rethink the role of education in general, and to discuss the meaning of literacy in particular. It is no longer possible to think about literacy without considering the technological and economic changes, especially because of two major transformations in relation to language and communication: a change from the dominance of writing to an increasing importance of the image; and a change from the dominance of the book (or print) to the dominance of the screen (Kress, 2005).

Considering the aspects mentioned above, the aim of this chapter is to provide a theoretical background to multimodality and multiliteracies with the aim of presenting a rationale for approaching literacy and education as central issues of discussion in many areas. Consequently, a discussion of the role of EFL teaching and learning is also provided.

1.1. Changing societies

The central role of knowledge in contemporary societies has been widely acknowledged. Knowledge has become even more crucial, especially because technological development has led to a greater demand for multi-skilled workers who engage in lifelong learning (Krieken et al., 2013, p. 171). Consequently, as pointed out by Cope and Kalantzis, “[a]s knowledge is the result of learning, education is more important than ever” (2009, p. 168).

In 1994, a group of researchers, who became known as the New London Group, met to discuss the role of literacy and learning in contemporary societies. They proposed a pedagogy of multiliteracies which presented valuable insights for education in this changing world. In their manifesto, the authors pointed out the changes that were happening in the mid-1990s, and how language and communication had changed at that time in three spheres of

society: people's working, public, and private lives (New London Group, 2000). Many of the changes they discuss, as well as some of their expectations, have since been observed. However, some positive perspectives relating to society's development seem to have taken certain negative directions.

By comparing old capitalism with new capitalism, the authors explain that in the past working lives were mainly characterized by a rigid hierarchy, a discourse of discipline and divisions of labor, which did not promote a learning environment and, consequently, workers were unable to develop new skills. Similarly, schools were places characterized by discipline where authoritarian teachers were the central characters in the learning process, and the students were passive subjects in their own learning process in which the main focus was memorization. The emphasis was on numeracy and literacy, which was by and large related to learning how to read and write in the national language.

In contrast, what we have been observing over recent decades, and especially by the end of the twentieth century, is that the relationships in working spheres have dramatically changed, and knowledge and learning have become central in professional environments. Enterprises seem to require workers who are able to not only perform different tasks, but who are also able to engage in lifelong learning. Bearing this in mind, innovation, creativity and learning how to learn are essential skills in a constantly changing society. Additionally, it is widely known that technology has been changing working relationships and professional communication. E-learning environments, Intranet platforms, and e-mails have been replacing more formal written memorandums, paper-based communication, and face-to-face training. The increased use of digital tools by companies has supported collaborative and individual work in many different ways as well.

However, as pointed out by the New London Group in 1994, these workplace discourses could be considered in two distinct ways: as new possibilities for education and social systems; or as new systems of mind control and exploitation. More than twenty years have gone by since the establishment of the New London Group, and despite all the efforts made by some scholars in transforming education, unfortunately, it is possible to say that what has been observed lately is much closer to new forms of exploitation. This position is explained by Cope and Kalantzis (2009) in their review of contemporary society:

The discourses and practices of today's workplace can equally be read as a highly sophisticated form of co-option — the co-option of teamwork, vision and mission and corporate culture, for instance, in which everyone is supposed to personify the enterprise, to think, will and act the enterprise. The more you feel you belong to this kind of enterprise, the more its inequalities — its iniquities indeed — recede into the inevitability of common sense. And a lot of people are left out of the new economy [...] Patterns of exclusion remain endemic. Even in the heart of the new economy, those who do not manage to clone to the corporate culture and buy into its feigned egalitarianism — people who find their difference makes them an outsider, however subtle — find their aspirations to social mobility hitting “glass ceilings” (Cope and Kalantzis, 2009, p. 170).

In fact, as stated by the researchers of the New London Group (2000), “It is not our job [as teachers] to produce docile, compliant workers. Students also need to develop the capacity to speak up, to negotiate, and to be able to engage critically with the conditions of their working lives.” (p. 13). Therefore, a pedagogy of multiliteracies may “help create conditions of critical understanding of the discourses of work and power, a kind of knowing from which newer, more productive and genuinely more egalitarian working conditions might emerge” (Cope & Kalantzis, 2009, p. 171).

Similarly, public lives have changed dramatically over the years. As explained by Cope and Kalantzis (2009, p. 171), over the past decades there has been a decentralization of the state and an increasing privatization of public services and organizations in the name of neoliberalism, which sells the idea of a greater liberty for citizens. Consequently, in many countries, there has been a systematic decrease in social investment and welfare programs. In many parts of the world, education has become a very lucrative business, thereby making it more market-based than a service provided by the state to its citizens. In this sense, the main target in many state schools, in some countries, is basic literacy and numeracy; thus, a greater gap is created between lower and upper classes, with only the latter able to afford a better education.

Furthermore, as mobility becomes easier, mass migration increases and, as a result, greater diversity is observed within public spaces. In many cities, teachers face diverse classrooms with students from different economic, social, and linguistic backgrounds. This diversity, as explained by Cope and Kalantzis (n.d.), is mainly generated by the impact of new technologies and mass migration, two aspects that are central reasons for proposing a new way of learning.

Private lives have been greatly affected by all the transformations in society, especially as a result of the development of new technologies. Personal relationships have dramatically changed in the current century with a greater exposure of people's private lives in social media. At the same time, mass migration, along with cuts in welfare programs and economic crises seem to be leading people towards a less tolerant society.

Sadly, and interestingly, mass media have played an increasingly significant role not only in the dissemination of information, but, in some ways, also in the reinforcement of intolerances and prejudices. This scenario was intensified in many Western countries by the 2008 financial crisis. This was not only the case in Europe, but in many places around the world; hence, creating serious situations concerning unemployment in many countries (Portugal included), which are struggling yet to offer better working conditions to their citizens. In Portugal, the economic situation has made many young adults leave the country in search of better jobs and opportunities. At the same time, the refugee crisis, due to poverty and wars, especially in Africa and the Middle East, has contributed to the emergence of a feeling of retrograde nationalism with demonstrations of cultural, ethnic, and racial prejudice invading not only social media, but also real lives.

As the authors state, “schooling in general and literacy pedagogy in particular, cannot afford to ignore the trajectories of change. They need to be able to justify the pedagogical paths they choose to take” (Cope & Kalantzis, 2009, p. 174). Undoubtedly, in order to create different learning environments and opportunities in the face of such changes, efforts have been made in many educational scenarios; however, it seems their long-term impact on societies, and on learning itself, is not yet clear.

1.2. Multimodality, communication, and technology

It is well recognized that discourse and social interactions have been greatly impacted by new technologies, especially the Internet. Since the outset of the Internet and the increasing growth of globalization, language and meaning-making have also undergone significant changes.

Kress (2005) explains that in the face of such transformations it is possible to identify two types of revolution: one is related to the modes of representation, in which it is possible to observe a change from the central role of writing to the increasing significance of the image; the second concerns the media of dissemination, “from the centrality of the medium of the book to the medium of the screen.” (ibid., p. 6)

Consequently, these two major changes, or revolutions, have had a great impact not only in social interactions, but also in the way knowledge is shaped. Therefore, one way of understanding the impact of new technologies on social interactions, and on discourse, is to analyze the relationship “between technologies of representation (the modes of ‘multimodality’) and technologies of dissemination (the media of multimediality)” (Jewitt, 2004, p. 184).

Multimodality is related to how meaning is made across communication processes and how we choose to make it through different modes. It is an approach through which communication and representation are understood to involve something more than the language in which those modes are always being shaped and reshaped by social practices.

The theoretical approach of multimodality which this work relies on is that of social semiotics multimodal analysis, as developed by Kress and Van Leeuwen (2001), which is founded on Halliday's (1978, 1985) theory of language description, Systemic Functional Grammar. Social semiotics draws upon the fact that language is social, therefore, it is shaped by people's social and cultural work, rather than being a ready-made resource.

Modes of meaning

Considering the notion of the *sign* as an element in which the *signified* (the meaning) and *signifier* (the material form) are brought together in order to make meaning, Bezemer and Kress (2016) argue that according to their view of social semiotics, *the sign* has three characteristics. The first one is that the relation between the *meaning* and the *form* is always motivated, rather than arbitrary¹. This means that a person chooses a form (signifier) based on its aptness to express a certain meaning. In this assumption, Kress (1993) relies on the theory of sign making, instead of sign use, that is, in social semiotics signs are not ready to use, rather they are made in context, motivated by situational and cultural aspects. In this regard, Kress further explains:

I wish to say that signs are always motivated in this manner by the producer's 'interest', and by characteristics of the object. It is 'interest' which determines the characteristics that are to be selected and to be represented. The relation of signifier to signified, in all human semiotic system, is always motivated, and is never arbitrary. (Kress, 1993, p. 173)

Additionally, the second characteristic is that a sign is also "shaped by the environment in which it is made, and its *place* in that environment" (Bezemer & Kress, 2016, p. 9). Therefore, signs are constantly being made by people (sign-makers). In this respect, when comparing traditional semiotics and social semiotics, Jewitt (2006) shows that social semiotics focuses on the notion of semiotic resource, rather than code (understood as a set of

¹The notion of arbitrariness was stressed by Saussure (1966). Focusing on language, he argued that the relation between the signifier (sound – in the case of speech; or shape – in the case of writing) and the signified (the meaning of a word) is arbitrary. This means, for instance, that the word 'ball' (its sound or written form) does not give any information about what it is or the object itself. However, the perspective adopted by social semiotics is that this relation is always motivated. Therefore, "in sign making (rather than sign use) the sign maker selects a signifier for its aptness to the expression of a particular meaning." (Arbitrariness, n.d., para 1).

rules that connects signs and meanings). This traditional perspective suggests that the semiotic system can only be used, not changed, and the author further explains:

Traditional semiotics sees language and other semiotic systems as a code: sets of rules for connecting signs and meanings. This means that once two or more people have understood the same code they can connect the same meanings to the same sounds or graphic patterns and understand each other. This suggests that the semiotic system is simply 'there'. It can be used but it cannot be changed in any way. The sign is viewed as a pre-existing conjunction of a signifier and signified, an element in a code, to be understood and used. This view of semiotic systems places people in a passive role to the production of meaning and establishes language and other semiotic systems as entirely stable". (Jewitt, 2006, p. 17)

On the other hand, social semiotics relies on the fact that signs are products of the social process and, in this approach, people are part of the meaning-making, and not only a producer. Jewitt also states that "signs are products of a social process of sign making in which a person (sign-maker) brings together a semiotic resource (a signifier) with a meaning (the signified) that they want to express" (ibid., p. 17-18). This means that in order to make signs, the sign-maker needs to choose from a variety of available modes of meaning, each mode having different meaning potentials and different social effects.

Mode, therefore, is a central concept in multimodality. As pointed out by Kress (2011), "[m]ode is a socially shaped and culturally given resource for making meaning. *Image, writing, layout, music, gesture, speech, moving image, soundtrack* are examples of mode used in representation and communication." (p. 54). The specific potential and limitation of each mode is called affordance (Kress, 2010), which is the third characteristic of a sign. For example, in order to communicate a concept through writing, in addition to lexis there are other resources available, such as color, font style, and layout. Alternatively, the same concept would be represented differently through images, leading to different meanings. Therefore, "[a]s modes offer different potentials for making meaning, this entails that signs – and their effects – made in one mode differ from signs made in other modes" (Bezemer & Kress, 2016, p. 9).

In this sense, as demonstrated by Jewitt (2011, p.14-15), it is possible to identify four interconnected theoretical assumptions that underlie multimodality. The first is that language is a part of a 'multimodal ensemble'; this means that although language is many times assumed as the main and most significant mode of communication, especially in learning and teaching contexts, communication and representation always involve several modes being articulated at the same time. The second assumption is that each mode realizes a different communicative work, that is, each mode has the potential to produce certain meanings. The third assumption is that meaning is made according to the choices people make of the modes

in order to communicate, therefore, the interaction between modes is crucial in meaning-making. The fourth and last assumption is that modes are (re)shaped by social practices in specific social contexts.

In other words, although there are certain conventions in the use of one mode or another to realize different concepts, when sign-makers choose to use these preexisting modes, they are constantly reshaping them in order to make the meanings more evident.

Additionally, as pointed out by Bezemer & Kress (2016), when some recognizable potentials of a resource (as a mode or sign) are constantly reshaped, this generates a tension between instability and stability. Instability is a marked characteristic of contemporary societies, and because of this instability it seems that the use of modes and signs is shaped less by conventions, which are not as stable as they used to be. Therefore, the use of semiotic modes should be analyzed and seen in relation to social, geographical, and historical conditions. As argued by Kress (2010), semiotic resources are never fixed and “[n]o degree of power can act against the socially transformative force of interaction.” (ibid., p. 8)

From this point of view, it is possible to state that communication is always multimodal (Kress, 2005). As language is not the only way people communicate, it is essential to look at and analyze beyond language to understand communication and interaction in contemporary societies. Jewitt (2013) explains that “Multimodality emphasizes the importance of the social context and the resources available to people to make meaning, with attention to people’s situated choice of resources (...)” (p. 2). Moreover, as signs and modes are culturally and socially motivated, it is also important to bear in mind that different cultures create different semiotic representations for making meaning. As pointed out by Kress (2010):

modes are the result of a social and historical shaping of materials chosen by a society for representation: there is no reason to assume that the mode of gesture in Culture 1 covers the same area or the same concerns or is used for the same purposes and meanings as the mode of gesture in Culture 2. (Kress, 2010, p. 11)

Color is a good example of a mode which can assume different meanings in different cultures; whereas black is the color related to funerals in many western cultures, in some eastern countries white is the color of mourning.

Although communication and representation have always been multimodal, the theoretical approach presented above, which explains in a more systematic way how and why it is imperative to look beyond language, is relatively new and has been developed since the early years of the twenty-first century. This can probably be explained by the huge and fast

transformations in contemporary societies, which may lead to the need to look at how communication has also changed. Considering that representation and communication are only possible through, and motivated by, social interaction, it is undeniable that the social changes seen at the end of the twentieth century, and especially in the twentieth-first century, have greatly affected language and how people communicate.

Mode, medium, and technology

As discussed above, mode refers to the resources used for communication or representation. On the other hand, medium refers to the way these representations are used to make meaning, that is, the way these texts are disseminated. Similarly, it is important to highlight that both modes and media have their own separate powers and effects, and therefore they offer different potentials and constraints for meaning-making.

As demonstrated by Kress (2003), the organization of the mode of writing (and also of speech) is different from the organization of the mode of image. While writing is governed by the logic of time and sequence, the mode of image is governed by the logic of space and, consequently, provides different ways of making meaning. These differences in the organization of those modes and the dominance that shifts from one to another have a great impact on the way a text is read and on the role of the author. In a book, for example, there is a sequence that it is necessary to follow in order to understand the message presented by the author. Therefore, the writer is much more in charge of the reading path their reader is going to take and is the one 'in charge' of the sequence in which the information is going to be presented. Although the reader could, of course, read a book by skipping chapters, for example, the sequence of words and sentences are quite static and the reader needs to follow them to understand the whole message.

On the other hand, although there are some ways to create reading paths in images, for instance, by using lighting, color, and the position of the elements, those paths are inevitably much more open, and the author does not have great control over what the reader is going to look at first. For instance, in a painting depicting a scene, an artist could use several techniques in an attempt to guide the reader through his or her narrative; however, the audience is much freer to look at the different elements and make other meanings based on those. The reader of an image, in this sense, has an increasingly effective role in making meaning along with the author.

It seems important, at this point, to clarify the meaning of the word text as it has been adopted in this work. A text, in the perspective adopted here, means any material object of representation resulting from social practices and interactions with the aim of making meaning, be it verbal, visual or both. As explained by Kress & Van Leeuwen (2006):

Texts are material objects which result from a variety of representational and production practices that make use of a variety of signifier resources organized as signifying systems (we have called these 'modes'), *and* a variety of 'media', of 'signifier materials' – the surfaces of production (paper, rock, plastic, textile, wood, etc.), the substances of production (ink, gold, paint, light, etc.) and the tools of production (chisel, pen, brush, pencils, stylus, etc.). (Kress & Van Leeuwen, 2006, p. 216)

The shift in the dominance of the medium of the page to the medium of the screen has intensified those transformations in the reading path and in the role of the author. Additionally, as pointed out by Kress (2003), the new media not only make the use of different modes easier, especially images and sounds, but also promote interaction among their users (interactivity) and the relation of users with other texts (hypertextuality).

The interactivity across the new media is seen in at least two ways: first, it is possible to write back to the author of a text more quickly and more easily when compared to the medium of a book; and the new media make it possible to create collaborative texts more easily, at the same time, without the writer even knowing the other authors involved in the process, for example, in the case of wikis (e.g. Wikipedia). Therefore, the notion of authorship has changed in different ways, not only because of the interactivity, but also due to the hypertextuality provided by these new media. With the notion of hypertextuality, the notion of the author as the source (or at least the unique source) of a text is put into question, as clearly explained by Kress (2003):

The metaphor of text-as-texture was in that respect always accurate: our experience of language cannot be, is never, other than the experience of texts. Our use of language in the making of texts cannot be other than the quotation of fragments of texts, previously encountered, in the making of new texts. The ease with which texts can be brought into conjunction, and elements of texts reconstituted as new texts, changes the notion of authorship. If it was a myth to see the author as originator, it is now a myth that cannot any longer be sustained in this new environment. (Kress, 2003, p. 5)

In other words, medium has a profound impact on meaning making and, in this case, the change from the page to the screen has intensified the spread of multimodal texts. Once new technologies facilitate the use of different modes, and each mode has its own potentials and constraints in meaning making, it is crucial to learn how to use the available modes by understanding their potentials for meaning. From this perspective, understanding how those modes work on the screen poses a central issue of discussion to learning (Jewitt, 2006, p. 12).

Consequently, the importance of knowing how to read and understand those multimodal texts is central, because if all modes in a message are creating certain meanings, each one of them carries an essential part of the information, and therefore, more often than not, it is impossible to read them in isolation. As Jewitt (2006) states, “[a]t times, the meaning realized by two modes can be ‘equivalent’, at others they may be complementary” (p. 12). Additionally, it is extremely relevant to understand how the modes are organized and how they interact with each other. All these aspects posed by new technologies and the medium of screen seem to have a significant impact on reshaping knowledge, especially in learning environments (Jewitt, 2013).

Jewitt (2013) presents interesting examples that illustrate how reading and writing in a learning context may reshape knowledge. Reading a novel in a digital format, for example, provides students with a totally different experience from reading it on paper, mainly because of the degree of the multimodal representation of the information presented. In order to provide an example, the author refers to the digital version of *Of Mice and Men*, by John Steinbeck. By presenting different modes and resources of interaction between the reader and the text, this digital book requires the student to articulate different domains of knowledge. As the author summarizes, “[r]eading in a digital context requires understanding meanings across different modes and understanding the principles and values of the design” (Jewitt, 2013, p. 19). Similarly, new technologies have also been transforming writing in learning contexts where there is an increasing use of images and sounds in students’ productions.

Summing up, as Jewitt claims, “the use of technology can literally transform what can be seen and by whom it can be seen” (2011, p. 4). Therefore, being a proficient reader and writer in contemporary society means knowing how to articulate the modes of representation in the different media in which they may appear.

1.3. Multiple literacies

The development of new technologies, and especially the advances in Web 2.0 technologies, have created not only new discourses or forms of interaction and other forms of integration, or opportunities, but also further divisions (Cope & Kalantzis, 2008). Therefore, education and literacy have to be rethought in order to address new forms of discourses and the wide range of multimodal texts that are mainly supported by new technologies, as well as also be able to provide solutions for inequality, prejudices, and poverty.

Consequently, as has been noted throughout this chapter, many researchers (for example Coiro, Knobel, Lankshear & Leu, 2008; Cope & Kalantzis, 2000, 2009; Kress, 2003; Kress & Van Leeuwen, 2001, Unsworth, 2001) focus on stressing the need to rethink education and the concept of literacy. It is clear that literacy cannot be understood as, nor limited to, learning how to read and write as it has been considered in the past. Thus, concepts such as ‘visual literacy’, ‘new literacies’, ‘multimodal literacy’, ‘digital literacies’, and ‘multimodal literacies’, which have been used to describe and point the way towards new practices of discourse impacted by technology, need to be addressed in education.

Multimodal literacy, as has been demonstrated in this chapter, stresses the fact that writing is a multimodal action (spatiality and directionality are important in meaning making) (Kress & Jewitt, 2003). It refers to meaning-making through the different modes and how we understand, respond, produce, and interact with texts (written, oral, visual composition, and so on), especially digital texts.

It seems relevant to stress that two aspects of multimodal literacy are crucial to education and classroom practices. The first is the effect of technology on reading and writing ‘on screen’ (in comparison to reading and writing on paper), and the second is the change in social practices in literacy that have been promoted by the development of the Web 2.0. (Walsh, 2010).

In the face of the social changes discussed in this chapter, and especially those related to the development of the Web 2.0, it seems increasingly relevant to also discuss the concept of digital literacy. Digital literacy (Buckingham, 2008) refers to the ability to perform some competences in a digital environment. In the past, the concept was related more to technical competences (e.g. computer literacy); however, as it cannot be restricted to technical use only, and since nowadays it involves different competences, it is also possible (and maybe more relevant) to talk about digital *literacies*, in the plural.

Being literate in a digital environment involves several competences. Besides learning how to understand and use different modes in the medium of the screen, it is also necessary to develop other skills, such as, but not limited to: Internet searching and research; hypertext navigation; knowledge assembly (that is, knowing how to gather and compare information from diverse sources); content evaluation; online safety; and online etiquette. Mastering the technical aspects of the new technologies, therefore, is not enough for new generations. As explained by Rojo (2012), the school needs to create practical opportunities for students to become effective meaning-makers by critically analyzing and reinterpreting the different discourses and meanings they receive or produce:

O trabalho da escola sobre esses alfabetismos estaria voltado para as possibilidades práticas de que os alunos se transformem em criadores de sentido. Para que isso seja possível, é necessário que eles sejam analistas críticos, capazes de transformar [...] os discursos e significações, seja na recepção ou na produção (Rojo, 2012, p. 29).

In this sense, being a critical analyst is essential in our contemporary knowledge society, so therefore, the concept of critical literacy² seems more important than ever. Critical literacy (Freire, 1987; Luke, 2000; Luke & Dooley, 2011) basically refers to the competences through which cultural and social relations and political power can be transformed, by analyzing and using text (Luke & Dooley, 2011). Although this is not a new concept, and it has been applied in many educational contexts, including second language learning environments, many scholars, educators, and researchers stress the importance of critically approaching digital texts.

For instance, in 2015, the Italian semiotician Umberto Eco caused some controversy when he stated that social media has given the idiots the right to speak. In his speech, he was actually referring to the need for younger generations to learn how to filter information on the Internet, as he pointed out when he said: *“uno dei grandi problemi della scuola italiana è aiutare i ragazzi a filtrare le informazioni su Internet”* (Radiocentodieci Unito, 2015). Clearly, this is a major problem not only in Italian schools, but also perhaps in education in general. Similarly, Andreas Schleicher, Director for the Directorate of Education and Skills at the Organization for Economic Co-operation and Development (OECD), in an interview with the BBC (Coughlan, 2017), pointed out the importance of teaching students to distinguish what is true from what is not true on the Internet.

In both cases, what has been stressed is the need to focus on different literacies, in order to fully and critically read the range of multimodal texts that have spread via new technologies, and thus, to become multiliterate in the new social contexts. In this sense, a multiple literacies and multimodal approach seems to offer perspectives on how to deal with texts, critically taking into consideration the new forms of discourse and meaning-making in contemporary societies.

² Critical literacy and critical thinking are closely related terms, but are not exactly the same. Considering critical thinking, it is more related to the attempt to read a text considering different views and without being biased and prejudiced. Critical literacy, on other hand, is based on the fact that all texts convey knowledge and power-related ideas, therefore, questions related to the author, the audience, the purpose and the ‘hidden’ messages should be approached when reading a text. (McInulty, 2013). In this study, however, these terms have been used interchangeably, since in the questionnaire sent to the English teachers (see the Appendix) the term ‘critical thinking’ has been used for simplicity reasons and because no further theoretical information was provided.

Furthermore, in the BBC interview, Schleicher highlights the importance of young people engaging with diversity, instead of seeing it as a problem, an issue that can be verified in many comments across social media. At this point, he highlights a technical feature of social media that would make the acceptance and debate across different cultures and realities difficult. By gathering people with similar ideas and behaviors, by means of online data collection, social media tend to provide less space for a debate on diversity in an attempt to find consensus and understanding. That is why, as explained by Luke (2000), it is crucial to provide new ways of thinking and interacting with others from different cultures and backgrounds. The author further explains:

Critical Multiliteracies for effective information sourcing from, and participation in, the new digital datasphere provides not only the rudimentary and 'functional' skills of, say, keyboarding, file management, CD-ROM searching, or Internet browsing. It also involves analysis of the power relations of new institutions and worlds [...] (Luke, 2000, p. 71).

The pedagogy of multiliteracies, as proposed by the New London Group in 1994, also emphasizes the importance of a pedagogy involving four knowledge processes: contextualization and background knowledge; clear and open instructions to learners about how various texts are structured; critical analysis by interpretation of the cultural and social contexts; and, the ultimate objective, development of the necessary knowledge to transform meanings from one context to another.

Therefore, in this changing contemporary world, where sometimes people seem to be so intolerant of diversity, it is increasingly important to learn, and to teach, how to read all the meanings that have been created and articulated by the different semiotic modes in a text, and to critically think about all those meanings and representations.

1.4. Multilingualism and English Language Teaching (ELT)

The phenomenon of multilingualism is stressed in many documents regulating education. For instance, the goal of the EU, in terms of multilingualism, is that European citizens are able to speak at least two foreign languages. On their website³, the EU highlights the importance of language learning because, among other things, "speaking other languages helps people from different cultures understand one another – essential in a multilingual, multicultural Europe".

English, for instance, has become more than ever the common language of the media, commerce, politics, and undoubtedly, of the Internet, the film industry, science, and

³ Retrieved on September 1st, 2017, from https://europa.eu/european-union/topics/multilingualism_en.

academia. As estimated by Crystal (2016), there are currently in the world around five non-native speakers of English to one native speaker. The consequences of the supremacy of the English language over other languages, also called linguistic imperialism, can be observed in at least two ways. On the one hand, an increasing emergence of new Englishes has been seen (Cope & Kalantzis, 2000; Crystal, 2003; Jenkins, 2009), while on the other hand, several minority languages are disappearing at an even faster rate than before (Cope & Kalantzis, 2008). Therefore, as argued by Cope and Kalantzis (2000), these linguistic and cultural issues are central in contemporary societies, which require the use of multiple languages and multiple Englishes for interactions. In this sense, working with cultural issues and multiple Englishes in a multimodal approach when teaching English as a foreign language is increasingly relevant.

In EFL classes, the use of multimodal texts is not new. In addition to written texts, audiovisual materials, for example, are commonplace in foreign language classes in general. Similarly, it is interesting to note that textbooks have changed considerably following the two revolutions put forth by Kress (2005), and now a greater number of visual compositions are present in comparison to those from the past. The increasing dominance of the screen has also been noted in static, printed texts, which have begun to be shaped like screens (Kress, 2005), so as to represent websites, blogs, emails, and to make them even more attractive to the reader.

In education, and especially in ELT, the increasing use of visual materials certainly has a profound effect in how meaning is made and how literacies should be taken into consideration. However, reproducing the screen on the page to make printed materials more attractive to students and teachers is not enough; pedagogical activities prompting the students to get involved and become aware of the meanings that are being created in the whole composition is also crucial.

Additionally, sociolinguists, such as Lippi-Green (2012), Jenkins (2009), and many others, have pointed out that all these varieties of English, all these new Englishes that are emerging in different contexts, can lead to discrimination and racism. Therefore, this scenario poses additional challenges to teachers of EFL. Students should be able to master the language in its formal aspects, but this alone is not enough to be a successful reader and producer of meanings in contemporary societies. Similarly, in a society with increasing diversity and controversial discourses, learning how to critically read and write is more and more important.

In this sense, a multimodal and multiliteracies approach to teaching EFL, using technological resources, seems to be of great value to teachers and students. As pointed out by Lotherington (2007), many studies have been developed on multiliteracies, multiculturalism, and multimodality in ELT. Such studies have raised discussions which target issues such as: *linguistic imperialism* (Nettle & Romaine, 2000; Phillipson & Skutnabb-Kangas, 1999; Skutnabb-Kangas, 2000); *digital literacies* (Gee, 2003; Kellner, 2004; Kress, 2003; Lankshear & Knobel, 2003); *language ownership and deterritorialized languages* (Graddol, 1999); *cultural identities in complex postmodern digital landscapes* (Castells, 2000; Hawisher & Selfe, 2000); *discourse and digital environments* (Baron, 2003; Crystal, 2001; Lotherington, 2004); *impact of globalization on language teaching* (Cameron, 2002; Zhenhua, 1999); and, *communication needs in an information-based economy* (Castells, 2000; Gee, 2000). All these aspects have changed the environment of ELT inside the classroom and posed challenges to English teachers, especially in regular schools that observe an increasing need to prepare younger generations for a fast-paced, technological society.

Chapter summary

In a fast-paced society, in which information has been made available with great speed and through different technological media, knowledge and learning are central issues. In order to address the demands and the need to rethink literacy and education, several theories have been developed in recent decades.

In this sense, this chapter aimed to provide an overview of the key-concepts and theories related to learning practices in contemporary societies which the present study relies on, namely: multimodality; multiliteracies; digital literacies; and, the role of the English language.

Therefore, the first section provided an overview of emerging changes in societies and their impact on learning and education. Meanwhile, the second section focused on the theories of multimodality and the implications of technology for communication. The third section discussed the need to integrate a multiple literacies approach in education, one which also encompasses digital literacies. Lastly, the fourth section presented a general view of the role of the English language (and its emerging Englishes) in digital and globalized western societies, and its implications for ELT.

In Chapter 2, a discussion of the Web 2.0 and its implications for education and language teaching is provided, in an attempt to support the idea of an effective integration of technology, multimodality, and EFL.

Chapter 2

Web 2.0, communication, and education

It is widely acknowledged that the development of new technologies, especially that of the Web 2.0, has changed the way individuals communicate and make meaning in contemporary societies. Although the use of digital tools in education has been steadily growing, and such use is usually associated with several advantages, such as fostering students' motivation and offering new ways of learning, it is also true that it poses many different challenges to students and teachers, especially to language teachers.

The aim of this chapter is to not only describe some features of the Web 2.0 and its tools, which have been shown to be useful for education, but also to discuss implications of its use in foreign language classrooms. In order to do so, in the first section, an explanation is provided of what is meant by Web 2.0 and its features. The second section presents a typology of the most common Web 2.0 tools used for learning, as proposed by Bower (2015). Additionally, the same section provides a discussion about the link of some of these tools with the revised Bloom's taxonomy (Anderson et al., 2001), and presents Bloom's Digital Taxonomy, as proposed by Churches (2009). The third section provides a discussion on the use of technology to promote multiple literacies in foreign language classrooms, with an emphasis on multimodal and digital literacies. Lastly, the final section establishes a link between Web 2.0 tools and the *Standards of Foreign Language Learning: Preparing for the 21st Century* (National Standards in Foreign Language Education project [NSFLE], 1996) issued by the American Council on the Teaching of Foreign Languages (ACTFL), as suggested by recent studies.

2.1. Defining Web 2.0

The term 'Web 2.0' was first coined in 2004 by Dale Dougherty, the vice-president of O'Reilly Media Inc., to designate the second generation of Internet services that focus mainly on enhanced publication, sharing, and interactivity. As pointed out by O'Reilly (2005), since it is not possible to establish a hard boundary for Web 2.0, he proposes instead a set of principles and practices that are easily recognizable to a wide range of technologies and websites on the Internet.

More than technical tools and market-oriented principles, the second generation of the World Wide Web carries important social implications. Web technologies currently in use have the fundamental feature of facilitating interaction among people by making it easier to

add, edit, and share information on different platforms. In general terms, the main difference between the Web 2.0 and Web 1.0 – i.e., the first generation of the Internet – is certainly the enhanced interactivity among people.

At the conception of the Internet, the creation and editing of content on the web was mainly restricted to a group of people and enterprises that mastered the tools and had the necessary equipment to create and provide information online. In comparison, Web 2.0 brought about the possibility for almost everyone to become an author and/or an editor in digital environments. Therefore, whereas the great majority of users of the first generation were consumers of information, many have now become creators and developers.

O'Reilly (2005) describes some fundamental principles that govern Web 2.0, namely: the web as a platform; harnessing collective intelligence; data are the next 'Intel inside'; end of the software release cycle; lightweight programming models; software above the level of a single device; and rich user experiences. To make this clear, these principles are briefly discussed below.

It is possible to say that the concept of the web as a platform is linked to mobility, which is a remarkable characteristic of current web applications. This means that digital resources that were previously accessible only by installing software on a computer have now been made available online. Software and applications are no longer strictly developed based on only one operating system, such as Windows or Mac, instead, they now have the web as a platform, which allows people to perform several tasks online. It can also be argued that this principle is associated with the end of the software release cycle. Where previously it was necessary to buy a CD or DVD with a software product, software is now viewed more as a service available to download and update online. In addition, many users have become developers and can add or modify settings of even the internal technical structure of many web applications.

Lightweight programming models are another common feature of Web 2.0 applications, in which simplicity and functionality are the keywords. This characteristic is certainly linked to the principle of software above the level of a single device. Nowadays, different pieces of software and applications are usually developed for several devices, and not only for computers. Consequently, it is possible to assume that lightweight programming models, and the possibility of having the same application running on different devices, are closely connected to the mobility, availability, and portability which allow people to 'carry' the Internet wherever they go. These aspects have led to the spread of real-time information

and content over the web. More importantly, they have enhanced the possibility for almost anyone to become a content producer.

At the same time, one of the most remarkable principles of the Web 2.0 is the possibility to harness collective intelligence, which emphasizes and supports collaborative work among Internet users. As people actively participate, they are creating more and more content, linking with one another, and increasingly improving the network experience. On this point, hyperlinking is a key feature, as stressed by O'Reilly (2005, p. 2, para 10): "Hyperlinking is the foundation of the web. As users add new content, and new sites, it is bound in to the structure of the web by other users discovering the content and linking to it."

Another central feature, which clearly carries social and individual implications, is that data has become the greatest valuable asset related to technology, i.e., the new 'Intel inside'. Many applications running on the Web 2.0 are based on personal data stored about people. If, in the past, the brand of hardware was one of the most relevant aspects related to technology, now, with the spread of technical expertise, data has become extremely valuable for companies, as they allow them to better understand people's behavior and online preferences. This can also be extremely relevant for education where some technologies may help teachers to better understand students and their learning behaviors.

Undoubtedly, all the principles listed above are correlated and aim to provide a rich user experience. The social aspect of the Web 2.0 can perhaps be considered its core, with crucial implications for education, and especially for language learning and teaching. Nowadays, there are a large number of applications based on these concepts, which are being developed for educational purposes.

2.2. Bower's typologies of Web 2.0 tools for learning and Bloom's digital taxonomy

Learning technologies have been used for some time now and in different scenarios. As digital resources are being constantly developed, it seems imperative to present at least a model of the typologies of the applications used for learning in an attempt to systematize its most relevant categories. Bower (2015) argues that it is pertinent for educators to understand the types of Web 2.0 tools available, as well as the resources and possibilities it provides.

The author conducted a study consisting of more than two thousand links that were reviewed from online archive sites, educational technology texts, online searches, and other papers on Web 2.0. A total of 212 Web 2.0 technologies for learning and teaching purposes were identified, of which thirty-seven types were arranged into fourteen clusters. The author

provides a schematic representation of those typologies, as seen in Figure 2.1. According to Bower's classification, there are thirteen main types of tools, namely: text-based; image-based; audio; video; multimodal production; digital storytelling; website creation; knowledge organization and sharing; data analysis; timeline; 3D modeling; assessment; social networking systems; and, synchronous collaboration tools, along with thirty-two subtypes of Web 2.0 tools which are briefly presented below, with some examples provided in brackets.

Text-based tools are mainly used for interaction, some of them also support collaborative writing. They consist of: synchronous text discussion apps (e.g. Twitter); discussion forums (e.g. Forums.com); note-taking and document creation apps (e.g. Google Docs).

Image-based tools usually make it possible for users to edit and draw images online, in addition to being able to share and interact with other users. Types of image-based tools include: image-sharing (e.g. Instagram); image creation and editing (e.g. Pixlr); drawing (e.g. Flockdraw); online white-boarding (e.g. Google Drawing); diagraming (e.g. Creately); mind mapping (e.g. Debategraph); mapping (e.g. Google Maps); and word clouding (e.g. Wordle).

Similar to image-based tools, *audio-based tools* and *video-based tools* make it possible to create, edit, and share audio and video. The subtypes of audio-based tools are: audio sharing (e.g. Soundcloud); and audio creation and editing tools (e.g. Voxopop – which also provides a voice-based discussion forum and may be useful for language classes). As for the subtypes of video-based tools, these consist of: video sharing (e.g. YouTube and Vimeo); video creation and editing (e.g. YouTube Video Editor and Screencast-o-matic); and video streaming (e.g. Google Hangouts On Air).

As *multimodal production tools*, Bower (2015) considers those that allow users to make presentations which use different modes to communicate, for instance, digital pinboards (e.g. Paddlet); presentations (e.g. Prezi); and lesson authoring, used to create learning sequences by both teachers and students (e.g. LAMS, BlendSpace and SoftChalk).

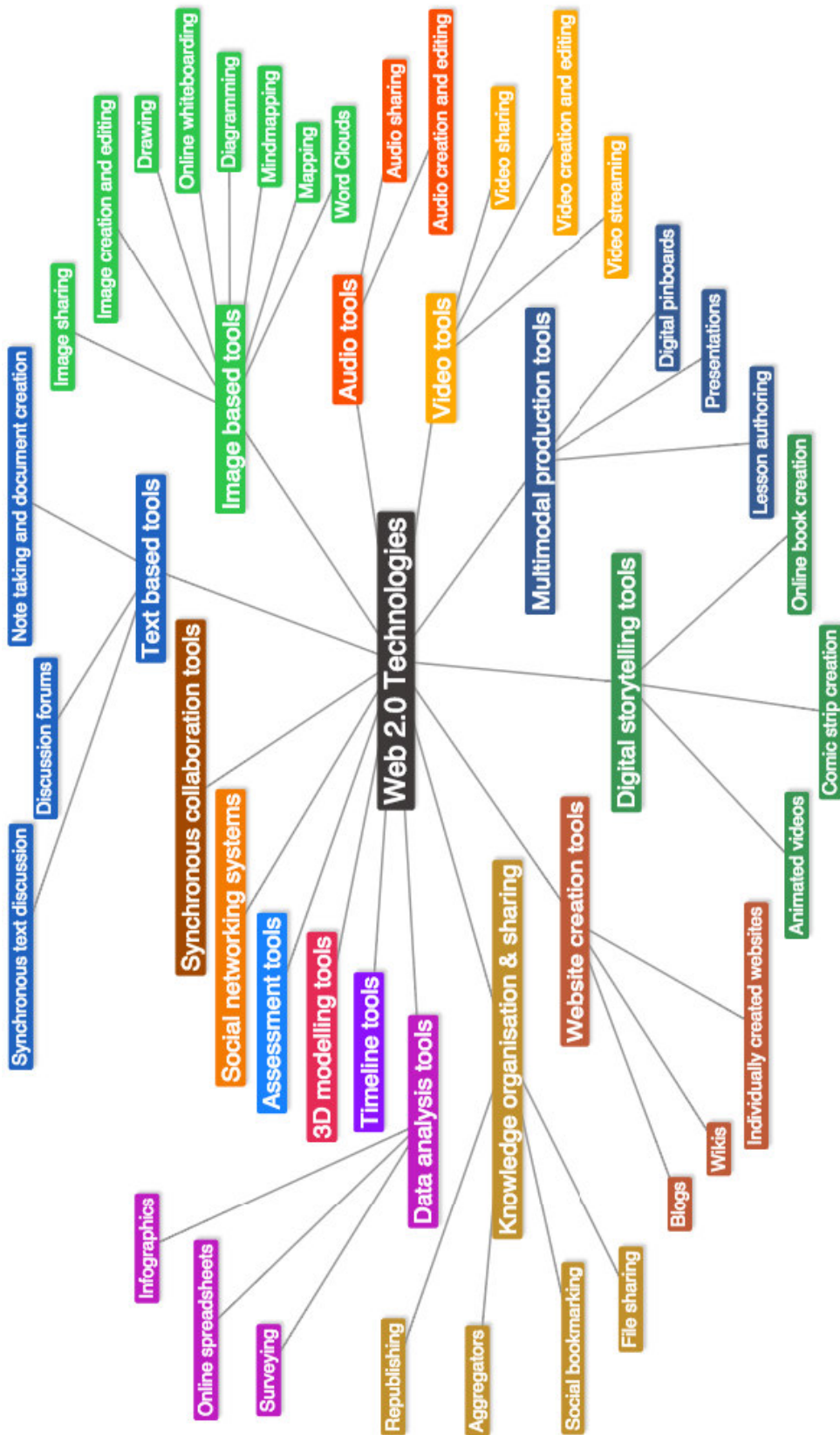


Figure 2.1. Typology of Web 2.0 learning technologies (Bower, 2015, p. 2)

It is necessary to note, however, that the cluster ‘multimodal production tools’ is not directly related to the concept of multimodality (Kress, 2010; Kress & Van Leeuwen, 2001) as discussed in Chapter 1. This is because many of the tools described by Bower (2015) are multimodal in the sense that they offer the possibility to work with the different semiotic modes, as described by Kress (2011). For example, digital storytelling tools use pictures and text to compose a story, while videos are a multimodal representation too. Nonetheless, Bower’s typology may be useful in order to outline and organize the different possibilities the Web 2.0 may offer to educators.

Surely, all the tools presented could be explored and used in many educational settings and language learning lessons; however, it seems important to note that *digital storytelling tools* seem to be especially useful in language classes. With these types of tools, students can create content by integrating written text, images, sounds, and movement. Online book creation (e.g. StoryJumper and MyStoryMaker), comic strip creation (e.g. Storyboard That and Pixton), and animated videos (e.g. Moovly) are examples of some of these types of tools.

Website creation tools are another type of web application, and include the following subtypes: individual website creation tools (e.g. Google Sites and Tripod); wikis (e.g. Wikispaces and PBworks); and blogs (e.g. Edublogs, Kidblog). These tools can be useful to enhance collaborative writing and feedback among students, or between teachers and students.

Knowledge organization and sharing tools have been widely used in learning scenarios, especially for file sharing and content. These consist of file sharing tools (e.g. Dropbox and WeTransfer), social bookmarking tools, which enable users to store, organize, annotate, and share links (e.g. Diigo, Educlipper); aggregator tools, which make it possible to organize, save, and share content on relevant topics for the users (e.g. Flipboard); and republishing tools, which allow users to republish content from the web (e.g. Pinterest).

Data analysis tools include various types of survey tools (e.g. Free Online Surveys), online spreadsheets (e.g. Google Sheets), and infographics tools (e.g. Infogram). These tools may be useful to create project-based tasks in language classes, which require survey and data presentation. Additionally, these tools may help to promote the integration between language and math, for example.

Additionally, *timeline tools* (e.g. Timeglider), *3D modelling tools* (e.g. Shapeshifter), *assessment tools* (e.g. Quizstar and EasyTestMaker), *social networking systems* (e.g. Facebook and Edmodo), and *synchronous collaboration tools* for conferencing and online classes (e.g. Zoom and Google Hangouts), also offer many possibilities to promote interaction

among students, and, therefore, can be used to enhance both writing and speaking in foreign language classes.

It is interesting to note that, as pointed out by O'Reilly (2005), the principle of the web as a platform and, most importantly, content sharing and interaction among users are common features found in almost all of the above-mentioned tools. It is not by chance that the Web 2.0 is also known as the "social web" (Healey, 2016, p. 18); therefore, it is inevitable that technology is not only shaping social relations and the way people communicate, but it is also shaping the way they build knowledge. This is one of the reasons it is crucial to include and explore at least some of these tools in educational settings.

Since the Web 2.0 has promoted the opportunity for users to become developers, it is clear that many of the above-described tools provide learners with the chance to easily create, edit, and share their content. Similarly, mobility is another fundamental aspect teachers may take advantage of, because most applications function on phones and tablets, and this may encourage learners to engage in more personalized learning (ibid.). Both aspects can be seen as good opportunities for learning. As interaction and social practices are key-terms related to the Internet, and considering that language is built and shaped by social practices, it is acknowledged that language teaching and learning can be enhanced with Web 2.0 tools.

As Healey (2016) predicts, it is possible that in the near future language learners will have more tools available to create their own learning paths. Although Healey was referring to self-directed learners, it is widely recognized that students' autonomy and engagement in the learning process are extremely significant even in the classroom. Therefore, it is possible to assume that soon, technologies will also provide tools for more personalized learning, even within diverse classrooms. In this sense, it is imperative for learners to learn how to select suitable digital resources in order to meet their own needs, learning styles, and learning pace.

The typology established by Bower (2015) may be useful for educators when considering the inclusion of some specific digital tools in the classroom, and also to offer a general overview of all the possibilities the Web 2.0 may provide.

However, another possible way to classify Web 2.0 tools and applications is using the revised taxonomy of the framework for categorizing educational goals, published by educational psychologist Benjamin Bloom and his collaborators, which became known as Bloom's Taxonomy. This original framework (Bloom, 1956) consisted of six major categories: Knowledge; Comprehension; Application; Analysis; Synthesis; and Evaluation, and has been widely used by educators in their learning.

In 2001, a revised version of Bloom’s taxonomy was published by a group of researchers (Anderson, et al., 2001). This version aimed to convey the dynamic conception of the cognitive processes by which thinkers encounter and work with knowledge. Therefore, the authors chose to use verbs and gerunds to label the categories and subcategories. This revised taxonomy is more closely related to the use of technology to promote certain learning processes and to achieve learning objectives. Figure 2.2 shows the pyramid of learning objectives according to the revised Bloom’s taxonomy.

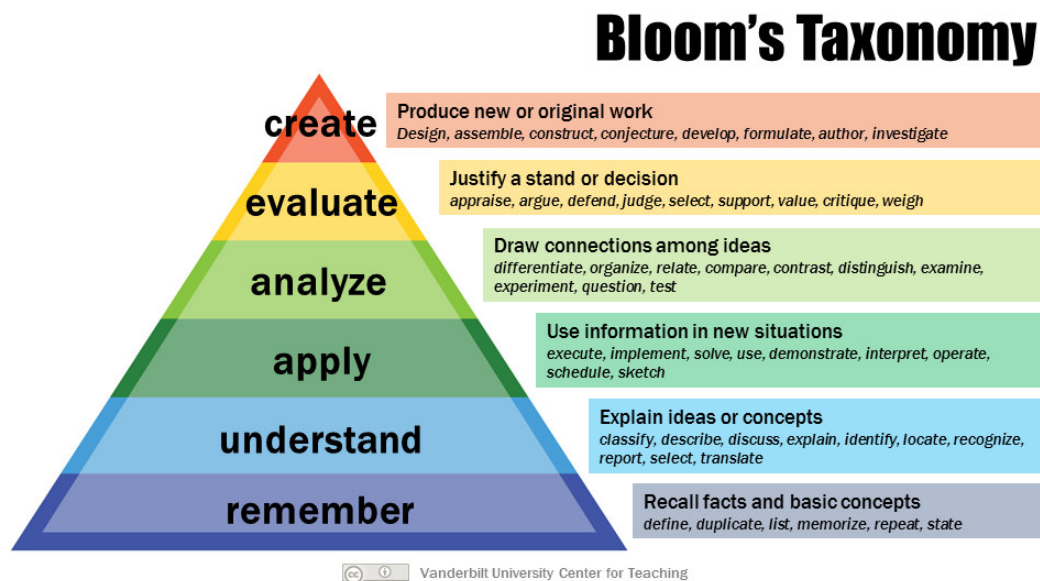


Figure 2.2. The revised Bloom’s Taxonomy
(Vanderbilt University Center for Teaching, n.d.)

There are different tools that can be used to integrate the revised Bloom’s taxonomy with technology, and in 2007, Churches (2009) revised the taxonomy again to include other descriptors that would account for “new behaviours, actions, and learning opportunities as technology advances and becomes more ubiquitous” (ibid., p. 3). As pointed out by Lightle (2011), “Bloom’s Digital Taxonomy help us navigate through the myriad digital tools and make choices based on the type of learning experiences we want students to engage in.” (p. 6-7). Figure 2.3 provides an overview of Bloom’s Digital Taxonomy and some related tools.

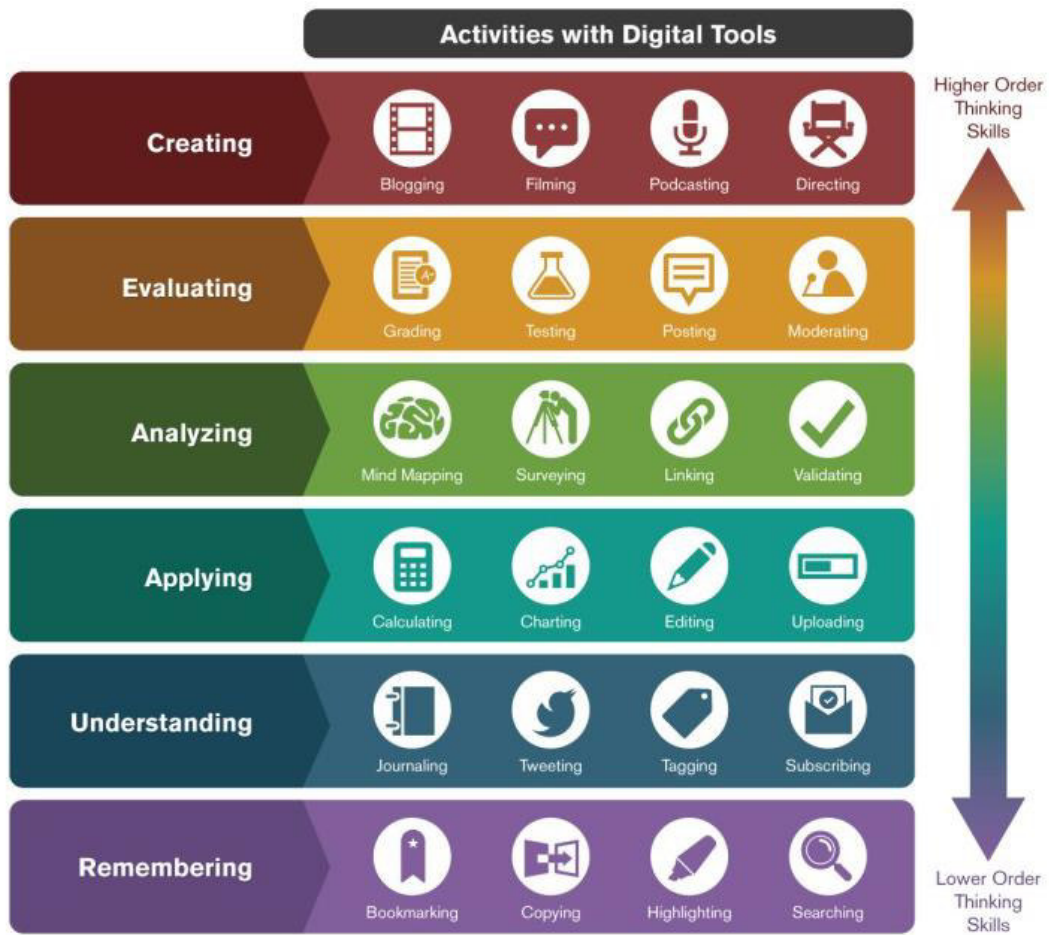


Figure 2.3. Bloom’s Digital Taxonomy
 (Infographic Credit: Ron Carranza, as cited in Sneed, 2016)

Considering Bloom’s Digital Taxonomy, as summarized in Figure 2.3, may help provide some ideas on how to relate learning objectives and the use of Web 2.0 resources, as classified by Bower (2015).

2.3. Web 2.0 and digital literacies

After defining the Web 2.0 and presenting some of its tools by relating them to learning, it seems relevant to discuss how students can deal with and develop all types of knowledge, which arise from the integration of new technologies in educational settings. Bustamante, Hurlbut, and Moeller (2012) explain that the Web 2.0 offers students a great opportunity to become producers and not only consumers of information (ibid., p. 109). In fact, the Internet promotes meaningful contexts which are essential for developing language skills, amongst many other abilities, by offering new ways of interaction and enhanced contact with authentic

(and multimodal) texts. In this sense, it provides innovative ways to produce language and to make meaning (ibid.).

As discussed in Chapter 1, the importance of, and the need for, a multimodal approach in education has been emphasized in many studies, and the Web 2.0 both supports and promotes the spread of multimodal texts. In order to understand and to make meaning in digital environments, students are required to know not only how the semiotic modes are articulated in the media, but also how to develop other necessary skills.

Therefore, as discussed in Chapter 1, different literacies are needed so that students are able to successfully read, write, listen, and speak thoroughly and critically. Guinchon and Cohen (2016) highlight three competences, among those listed by Erstad (2011), that an individual needs to develop in order to communicate effectively in a digital environment: to communicate through different mediational means; to cooperate in networks; and to create different forms of multimodal texts (ibid., p. 107). These digital literacies mentioned by the author highlight the importance of a multimodal literacy approach in language learning, and how it is important to wisely approach and use new technologies in educational settings.

The New Media Consortium, a community of educational and research entities with the aim to encourage the use of new media and technologies for learning⁴ defines and further explains the concept of twenty-first century literacy, which encompasses many of the literacies presented and discussed in Chapter 1. As they summarize:

21st century literacy is the set of abilities and skills where aural, visual and digital literacy overlap. These include the ability to understand the power of images and sounds, to recognize and use that power, to manipulate and transform digital media, to distribute them pervasively, and to easily adapt them to new forms. (New Media Consortium, 2005, p. 2)

In addition, the consortium lists a number of characteristics that constitute twenty-first century literacy, which seems to be of great value to educators, especially language teachers. According to the document, twenty-first century literacy should be multimodal, it should develop the ability to articulate meaning in new forms and to understand the layers of meanings conveyed (ibid., p. 3). This contemporary literacy also implies learning a new grammar, which is understood as the new rules of communication and meaning-making in the new digital environment. Furthermore, it should encourage interaction, and encompass the ability to recognize, understand, and manipulate the “power and immediacy of imagery and of sound” as communication tools, so therefore, it “has the potential to transform the way we learn” (ibid.).

⁴ Retrieved September 5th, 2017, from <https://www.nmc.org>.

As mentioned in Chapter 1, multiple literacies are required in contemporary societies, and multimodal literacy is one of the many literacies currently required, as also acknowledged by the New Media Consortium (*ibid.*), in addition to the ability to think and respond critically, and to learn the ‘new rules of the game’, i.e., the new ways of making meaning in contemporary societies.

There is a general assumption that digital natives⁵ (Prensky, 2001) are highly skilled in all new technologies. However, many studies on new technologies have shown a predominant use, almost an addiction, to smartphones for social interactions. This means that learners have, in fact, rarely been using different digital platforms to promote and support their learning. As explained by Sansone (2008, as cited in Dudeney and Hockly 2016, p. 116), although digital natives are comfortable with the use of new technologies, they are not comfortable in using those digital resources for their learning and knowledge.

Although many young students may come to the classroom already largely familiar with at least some new technologies, they are likely to lack the knowledge on how to not only make the most of online resources to improve their learning, but also on how to find reliable information on the Internet, how to fully and critically interpret the information they find, and how to successfully make meaning online. In this sense, the digitally literate person, as explained by Dudeney and Hockly (2016), should know:

how to accomplish goals, but also understands why these goals are important, and what relationship they have with the wider world around them. Knowing how to use Facebook is a skill; knowing how to use it to build a community of like-minded individuals and to use that community for professional and personal development is a literacy (Dudeney and Hockly, 2016, p. 117).

It is possible to add, however, that building a community within social media that actually raises awareness of cultural and social aspects through the promotion of inclusion, democracy, and respect for diversity, is a highly-needed literacy nowadays and should be encouraged in schools.

It seems relevant to highlight that “understanding the role of culture within the language being learned; and becoming part of a supportive learning community” (Healey, 2016, p. 21) are also key factors. In this sense, it is likely that language teachers will need to be able to support the development of those elements (*ibid.*).

Therefore, educators should “assist in the transformation from practical, social use of technology to a more rigorous, pedagogical use” (Sansone, 2008 as cited in Dudeney &

⁵ A term used to refer to people who were born into a society full of new technologies and connectivity, as opposed to digital immigrants, a term used to describe those who were born before the spread of new technologies.

Hockly, 2016, p. 116). Additionally, as explained by Bustamante et al. (2012): “[t]he role of the teacher is to find ways to capitalize on these skills and channel them into learning experiences that are real and engage the learners in problem solving tasks that maximize critical thinking and creativity (p. 109).

Aiming to provide a detailed classification for this set of abilities, in order to become digitally literate, Dudeney, Hockly and Pegrum (2013) propose to organize these new digital literacies into four main areas: language; information; connections; and (re)design (Dudeney & Hockly, 2016, p. 117)

Language literacy, from this perspective, includes the abilities that are involved in (but not limited to): reading and creating online texts, such as blog posts, tweets, or emails; knowing the conventions of the language used for texting; understanding and effectively producing messages with hyperlinks; understanding and producing messages with a variety of semiotic modes, such as images, sounds, or videos; navigating online worlds, such as in games, and therefore, developing kinesthetic and spatial skills; understanding how to use geolocation and how mobile technology and hyperconnectivity (always being connected to the Internet) is changing the world; and having at least basic technical knowledge, as well as knowledge of HTML coding, in order to grasp how online tools work.

The area of information literacy includes the ability to search, identify reliable information, and label (tag) online content. Whereas the area of connections consists of a set of competences an individual needs in order to create their own identity and to “participate in wide social groupings that transcend more closed groupings in terms of ethnicity, religion, geography” (Dudeney & Hockly, 2016, p. 120). These competences include knowing how to create and project one’s online identity, which involves issues of online safety; the capacity to participate in online networks, by helping to filter and share information; the ability to effectively participate by providing comments and one’s own opinion on blogs, tweets, and so on; mastering cultural and intercultural literacy, which involves interacting effectively with people from different cultures. The competence of (re)designing includes the ability to recreate content or give it a new purpose, so as to make something new.

Therefore, the focus on content and on other important issues, such as safety, critical thinking, and etiquette, are likewise fundamental literacies to be learned and taught in digital environments. Undoubtedly, this scenario poses new and increasing challenges to EFL teachers, since they usually have time constraints and are expected to follow the curriculum established for teaching the English language. In this sense, Dudeney et al. (2013) also

propose a dual approach in language lessons where the aim is to achieve both language and digital literacies, as can be seen in the examples briefly discussed below.

One of the activities proposed by the authors involves working with language and hyperlinks. Students are asked to read two online texts, one of them with many hyperlinks and another with no or few hyperlinks. After completing interpretation and other language-related exercises, students are expected to spot the differences they experienced when reading both texts, by reflecting on their reading path and how easy or difficult they found each text to read (Dudeney & Hockly, 2016, p. 122).

Another possibility is to raise awareness of plagiarism and copyright issues is to ask students to search for images on a specific topic on Google and then on a copyright-free image bank (e.g. Wikimedia Commons), so as to create, for example, a blog post with their own text using copyright-free images. By doing this, students are able to observe and learn how to identify copyrighted images on the Internet (ibid., p. 123).

Additionally, an activity focusing on searching for and analyzing reliable information is also proposed: a teacher can select an article from a spoof website⁶ (e.g. Zapato Productions or The Museum of Jurassic Technology) without telling students where it is from; after working on language comprehension and image reading, the teacher promotes a discussion with the students by asking them if they believe the information they have just read. It would also be valuable to analyze the elements which prove that the website is a spoof, for example, by examining the URL, questionable content, headers and footers, taglines, layout, font, and so on (ibid.).

2.4. The ACTFL Standards for Foreign Language Learning⁷ and technology

New technologies in general, and the Web 2.0 in particular, offer a great opportunity to enhance foreign language competences. However, in order to better integrate the use of technologies with foreign language learning objectives, some studies (e.g. Bustamante, et al., 2012; Riepel, 2011; Yang, 2001) suggest a way to integrate the *Standards for Foreign Language Learning*⁸, issued by the ACTFL, with Web 2.0 tools.

⁶ A spoof website is a fake website that usually imitates other reliable sites.

⁷ The ACTFL Standards for Foreign Language Learning is a publication issued in the United States to provide guidance and to establish the National Standards of foreign language learning. Therefore, it was first conceived for the learning and teaching of languages other than English. However, it can also be applied to learning and teaching EFL.

⁸ The Standards were first published in 1996, and a revised version was recently issued entitled *World-Readiness Standards for Learning Languages* (The National Standards Collaborative Board, 2015) and it is based on

The standards, briefly presented below, are based on five goal areas, commonly known as the 5 Cs:

- Communication – students need to communicate effectively in foreign languages; communication, then, occurs through three different modes (interpersonal, interpretative, and presentational);
- Cultures – students need to gain knowledge and understanding of other cultures;
- Connections – students need to build connections with other disciplines and acquire information;
- Comparisons – students need to be able to understand language by making comparisons between their native language and culture and others studied;
- Communities – students need to be able to participate in multilingual communities at home and around the world.

All of these goals are interconnected and very significant for effective foreign language learning. As the main focus of the present study is communication, and the standards proposed for it seem to provide meaningful ideas on how to integrate it with the use of the Web 2.0, this particular goal is further discussed below. However, it is vital to emphasize that in order to effectively and critically communicate, it is crucial to understand the cultural context and social relationships established within a society, and to make connections between one culture and another. In both cases, at a linguistic and at a cultural level, technology seems to offer useful tools when, and if, it is wisely used.

The communicative goal as described in the document issued by the ACTFL emphasizes three standards that are translated into three modes⁹ of communication and that students are required to master in a foreign language: Standard 1.1 – interpersonal mode; Standard 1.2 interpretative mode; and Standard 1.3 – presentational mode. These three standards are further discussed below.

Standard 1.1, which focuses on interpersonal communication, states that “students engage in conversations, provide and obtain information, express feelings and emotions, and exchange opinions” (NSFLE, 1996). The focus of this standard is on interaction, on the contact made in oral or written communication between individuals. Bearing in mind that

teachers’ practices over the years. The goal areas and standards have been kept, however, this revised version provides further clarification on how to guide the implementation of the Standards.

⁹ It is important to clarify that the term ‘mode’ here does not refer to the concept of semiotic mode as developed by Kress (2010, 2011) and presented in Chapter 1. Instead, it describes how communication occurs among individuals, and what to encourage and expect from language learners.

language is basically social, and that it is through social interactions that meaning-making occurs, it becomes clear that in order to provide information and to express feelings and emotions many factors besides language are also important. The language skills most emphasized in this standard are listening and speaking; however, in order to fully develop these skills (in addition to grammar, pronunciation, and vocabulary), cultural aspects and context, as well as knowing how the different semiotic modes are articulated at the moment of speech, are also crucial. These semiotic modes, such as gestures, facial expressions, and even tone of voice (in the case of speech), layout, font, and colors (in the case of writing), have to be understood and produced within a particular context for students to fully meet this standard.

By its own nature and purpose, the Web 2.0 focuses on social interactions and seems to provide significant tools and insights for both teachers and students, so that they can successfully achieve this communicative goal. Texts, tweets, and voice messages are some examples of how to promote interactivity among students. In this sense, multimodal tools, social networking systems, and synchronous collaboration tools (Bower, 2015) seem to be the most useful in order to develop this communicative mode. In addition to the examples provided in section 2.2, Skype and WhatsApp are also widely known applications that can be used to promote interactive communication. Such tools also promote interactivity on a more global scale, by facilitating contact among students from different parts of the world.

It is essential, however, that teachers are prepared and that they prepare their students to use these digital tools, which focus on interpersonal communication, one of their main aspects being spontaneity. Moreover, as some of these tools may imply security-related issues, it is also crucial to discuss how to be safe online with students. The Common Sense Media website¹⁰, for instance, provides a list of social media applications, which provide target ages and safety-related comments for parents and educators.

In sum, if used to communicate with students from different parts of the world, in addition to using the language in real contexts of communication, students will also be able to learn key cultural aspects. As English is a global language, it is increasingly important for students to be in contact with different Englishes, cultures, accents, and ways of making meaning. Additionally, such tools also seem to offer the opportunity, or the need, to focus on digital literacies, such as safety (as mentioned above) and Internet etiquette.

¹⁰ Retrieved on September 5th, 2017, from <https://www.commonsensemedia.org/reviews/category/app/genre/social-networking-95>.

Considering now standard 1.2, which focuses on the interpretative mode, it states that “Students understand and interpret written and spoken language on a variety of topics” (NSFLE, 1996). This standard focuses on the relationship between the individual and the text – considered herein in its more comprehensive approach (see Chapter 1, p. 13, for a definition of text). The language skills most emphasized in this standard are reading and writing; however, as aforementioned, in order to fully and critically understand and interpret a text, students have to read through the different modes (writing, image, sound, and so on), and be able to interpret context and cultural aspects as well. Considering that new technologies have facilitated the spread of multimodal texts, the way to approach text interpretation in the classroom has also changed.

In this respect, the Web 2.0 provides different tools that are useful in foreign language teaching and which can promote the use of different authentic multimodal texts to students in an accessible way. The value of authentic materials to both students and teachers is widely acknowledged, and as the Internet is a great source of many different types of texts on a variety of topics, it is widely used by teachers to create activities based on authentic materials found online. Koning (2013b), for example, points out the case of a Spanish teacher in the US, named Pilla, who stresses that the major issue faced by teachers is to find the right material online. Certainly, this is also true for other languages, especially English. It is true that the majority of texts on the web are in English and, at first glance, it would seem to be relatively easy to find suitable material for a lesson. However, precisely because of the vast possibilities available online, it is very easy to get lost. In addition, as this Spanish teacher in US emphasizes, another central aspect is to prepare the questions or activities according to students’ needs, so that they meet the required learning objectives.

In addition to providing new and easy ways to work with authentic texts, one of the most important aspects provided by the new technologies, and enhanced by the Web 2.0, is the way a text is read online, which is quite different from the way it is read on paper, as pointed out by Kress (2005). In this sense, the teacher should not only approach the linguistic aspects, but also understand that it is essential to guide the students in learning how to read, and consequently, to interpret the message. As online texts are interconnected via hyperlinks, it is likely that different meanings are created depending on the learning path adopted.

In this sense, it is possible to say that hypertextuality has broadened the concept of intertextuality (see, for example, Allen, 2000 for more information on intertextuality and hypertextuality). Additionally, because of its own nature and the great use of images, sounds, colors, and layouts, the Web 2.0 has also changed the way a reader interacts with the text.

Readers are more in charge in terms of the meaning-making of the texts they read, especially by creating different reading paths.

There are undoubtedly many options on the Internet to develop and work on interpretative communication, from widely-known online newspapers, encyclopedias, and blogs, to videos and podcasts. The challenge faced by teachers in general, though, is in adapting and preparing tasks relevant to their classroom. In addition, some authentic videos or podcasts may be difficult in terms of language, depending on the level of the class. In this respect, the Web 2.0 seems to also offer tools that aim to facilitate the teacher's job. Applications such as Screenflow and Camtasia make it possible to create and edit videos by cutting them and adding text, sounds, and images to make them suitable for classroom use. Snagit is another tool that can be used to capture screenshots, of any size, and add content as necessary. Therefore, audio and video sharing tools, multimodal tools, and file sharing tools (Bower, 2015) seem to offer many possibilities for teachers and students to promote this standard in the foreign language classroom.

Finally, the third and last standard concerning communication, 1.3, states that "students present information, concepts, and ideas to an audience of listeners or readers on a variety of topics." (NSFLE, 1996). The focus of this standard is on the relationship among the writer(s), or producer(s), the text and their audience. Although presentational communication is mostly related to assessment, presenting information effectively in different settings (formal or informal) may be challenging for students. When delivering a message without interlocutory interventions, additional aspects need to be considered, such as maintaining the audience's attention, adding new information or opinions, and creating impact image-based presentations (Koning, 2013c). Writing and speaking are the language skills most emphasized in the presentational mode and, in order to present information successfully, students should also be aware of the social relations and cultural aspects involved.

New technologies are widely recognized for providing many different ways of presenting information, using not only language, but also images, graphs, songs, and sounds. Therefore, it is essential to know how to articulate all these semiotic modes in order to make meaning.

Additionally, interactivity is another fundamental aspect that students should take into consideration when creating and presenting messages. Feedback occurs almost instantly when posting on social media or when writing a blog, for example. Therefore, the roles of author and reader have changed a great deal, and in an educational setting, the Web 2.0 may offer a variety of options, especially for teachers to provide more efficient feedback, and for students

to work collaboratively with other students from a variety of grades, schools, or geographical regions. Wikispaces, for instance, is a platform that promotes collaborative writing and allows students to keep track of their work. Another example is Storyboard That, as described in Bower's typology (2015), which allows for the creation of comic-like stories, providing scenes, characters, images, and text.

Although technology may offer different opportunities to improve foreign language learning both inside and outside the classroom, it is crucial that teachers explore the tools before presenting them to students, so that they are aware of their limitations and whether they meet the established educational needs. Additionally, "it is important for educators to evaluate not only the message presented by the students, but also how well the message is supported and strengthened by the use of technology" (Koning, 2013c, p. 45).

Summing up, based on the descriptions and discussions provided, it is possible to say it is clear that the Web 2.0 offers great opportunities and tools to enhance foreign language learning when wisely chosen and used. Additionally, it is also necessary to be aware of, and to focus on, students' needs and learning objectives when creating activities using online resources. Being aware of, and prepared to apply digital technologies in a meaningful and critical way in the classroom seems to be one of the greatest challenges for teachers.

Chapter summary

The aim of this chapter was to define the Web 2.0, to present some tools that have been useful for education, and also to briefly discuss the implications of the Web 2.0 for foreign language learning. In order to do so, the first section provided an explanation and definition of the Web 2.0, while the second section presented a typology of Web 2.0 tools for learning, as proposed by Bower (2015), along with a brief discussion of Bloom's Digital Taxonomy (Churches, 2009). In the third section, the promotion of digital literacies with the use of the Web 2.0 was examined. The fourth and final section reviewed the possible application of some Web 2.0 tools in the classroom, which foster the ACTFL Standards for Foreign Language Learning.

It was concluded that although the Web 2.0 offers many possibilities to enhance language skills in foreign language classrooms, teachers also need to promote other literacies, namely digital and multimodal literacies, so that students become proficient readers and content producers in digital environments.

In the next chapter, an analysis of the documentation on technology and foreign language learning in the EU is provided. Additionally, Chapter 3 discusses the English language syllabi and the future goals for digital literacy in Portugal.

Chapter 3

New technologies and learning in the EU and Portuguese contexts

It is widely recognized – as already discussed – that the rapid change in societies, especially due to the development of new technologies, demands an increasing number of digital competences¹¹ from citizens. The use of technology in education has been acknowledged by different sectors of the government, and measures have been taken to establish frameworks and policies to support the use of new technologies in educational settings.

The purpose of this chapter is to provide an overview of the initiatives that have been proposed to support the development of digital literacies among Europeans citizens in general, and Portuguese citizens in particular. In order to do so, the chapter is divided into two main parts: the first section focuses on the discussion of documents issued by the EC (namely DigComp 1.0, 2.0, and 2.1; DigComp.Org; and the report *Improving the effectiveness of language learning: CLIL and computer assisted language learning*). The second section focuses on the document issued by the Portuguese government concerning digital competences (INCoDe.2030 initiative), in addition to English Language Syllabi for the third cycle (Years 7 to 9) of basic education and secondary education (Years 10 to 12). The Learning Goals for Information and Communication Technology (ICT) are also briefly presented.

In each of these parts, the primary aspects of digital competences are discussed, followed by a more specific approach related to foreign language learning. For example, the CALL report (Scott & Beadle, 2014) issued by the EC provides clarification and supporting data from different studies (e.g. Baturay, Yıldırım & Daloğlu, 2009; Casado & García, 2000; Dourda, Bratitsis, Griva & Papadopoulou, 2013; Golonka, Bowles, Frank, Richardson & Freynik, 2014; Kongrith & Maddux, 2005; Mendelson, 2010). In the Portuguese context, the English Syllabi analyzed – third cycle of basic education and secondary education – do not explicitly address the use of technology in the classroom, but they provide some general comments and insights that might lead to the possible use of technology in the EFL classroom.

¹¹ As already discussed in Chapters 1 and 2, digital competences refer to the set of abilities an individual needs in order to become digitally literate. In general terms, it means to learn how to fully and critically interpret the information found on the Internet, and how to successfully make meaning online. For further discussion on digital literacies, see for example Dudeney and Hockly (2013). In this chapter, digital competences are discussed in light of the aforementioned documents.

3.1. The European context

According to the data provided on the website¹² of the EC (para. 3), in the EU, 37% of workers lack digital skills, only around 20% of children are taught by teachers who have confidence in using technologies, and more than 50% of students never use digital books or other digital resources for learning. These figures reflect, as recognized by the Commission, an urgent need for improvement in areas related to digital technologies, such as infrastructure, in-service training for teachers, and development of high-quality digital educational resources. While the need for action towards a digital literacy approach in education is widely recognized and undoubtedly required, it is not a simple approach to integrate, not only because of the issues pointed out, but also because of the implications and impact that new technologies have on societies and individuals. In this sense, it is necessary to clarify what is understood by digital competences and digital literacies within the EU context.

Aiming to provide some clarification and guidance on the subject, the EC has developed some frameworks, such as the *Digital Competence Framework for Citizens* (DigComp) and the *Digitally Competent Educational Organizations Framework* (DigComp Org) for educational organizations, which will each be taken a look at individually.

DigComp

The DigComp aims to provide a tool to support and improve people's digital competences. On the website¹³ dedicated this document, the EC states that it believes it “can help citizens with self-evaluation, setting learning goals, identifying training opportunities and facilitating job search[ing].”

The objective of the first edition of the document, known as DigComp 1.0 (Ferrari, 2013) and issued in 2013, was to provide clarification on digital competences and to demonstrate the importance of developing policies and supporting the integration of new technologies in education in a more effective and efficient way. Thus, the framework proposed encompasses five dimensions: *Dimension 1: Competence areas identified to be part of digital competence; Dimension 2: Competence descriptors and titles that are pertinent to each area; Dimension 3: Proficiency levels for each competence; Dimension 4: Knowledge, skills and attitudes applicable to each competence; Dimension 5: Examples of use concerning*

¹² Retrieved April 29th, 2017, from https://ec.europa.eu/education/policy/strategic-framework/education-technology_en.

¹³ Retrieved April 29th, 2017, from <https://ec.europa.eu/jrc/en/digcomp>.

the applicability of the competence to different purposes. However, as new technologies are developing rapidly and causing a relevant impact in the workplace and in education, there was a need to update the concepts and vocabulary presented in the original framework. Consequently, the EC planned a two-phase update, DigComp 2.0 (Vuorikari, Punie, Carretero & Brande, 2016) and DigComp 2.1 (Carretero, Vuorikari & Punie, 2017).

The first phase of this two-phase update, DigComp 2.0, revises the first two dimensions (*the competence areas, and the descriptors and titles*). It focuses on the conceptual reference model, new vocabulary, and streamlined descriptors, and provides some examples of how the framework is being used across Europe. The main objectives, therefore, were “to update the vocabulary, to streamline the competence descriptors by reducing redundancy, and to include relevant updates regarding EU legislation” (DigComp 2.0, p. 6).

The first two dimensions of this structure – *areas and competences* – describe what competences an individual needs to develop in order to be considered digitally competent in the twenty-first century. It is important to understand what is meant by ‘digital competences’ and what they involve; therefore, its organized structure is summarized in Table 3.1:

Areas	Competences
1. Information and data literacy	1.1 Browsing, searching, filtering data information and digital content 1.2 Evaluating data information and digital content 1.3 Managing data, information and digital content
2. Communication and collaboration	2.1 Interacting through digital technologies 2.2 Sharing through digital technologies 2.3 Engaging in citizenship through digital technologies 2.4 Collaborating through digital technologies 2.5 Netiquette (which involves being aware of behavior and rules when interacting and adapting discourse according to the audience) 2.6 Managing digital identity
3. Digital content creation	3.1 Developing digital content 3.2 Integrating and re-elaborating digital content 3.3 Copywriting and licenses 3.4 Programing
4. Safety	4.1 Protecting devices 4.2 Protecting personal data and privacy 4.3 Protecting health and well-being 4.4 Protecting the environment
5. Problem solving	5.1 Solving technical problems 5.2 Identifying needs and technological responses 5.3 Creatively using digital technologies 5.4 Identifying digital competence gaps

Table 3.1. Areas and competences described in DigComp 2.0 (p. 8-9)

Upon analyzing Table 3.1, it is evident that many of the digital competences described focus mainly on communication and interaction. Based on what has been discussed in previous chapters, it seems increasingly clear that these competences can, and should, be addressed and developed in language lessons with the use of appropriate tools, approaches, and preparation. Additionally, these competences are increasingly important in English language classrooms due to the importance of English on a global and technological scale.

While the first three areas – *information and data literacy*, *communication and collaboration*, and *digital content creation* – seem to be more easily integrated within English lessons, the other two – *safety* and *problem solving* – are also of crucial importance and should not be neglected, as it is impossible to work with technological resources without considering these issues. These areas could be addressed, for example, by discussing them directly through texts and/or videos, or during activities in which students interact with each other using new technologies.

Safety issues, for instance, have increasingly become a concern among parents and educators; therefore, discussing the negative impact technology may have, in terms of technological addiction, lack of socialization, or cyberbullying, is of crucial importance, especially for adolescents.

The second phase of the two-phase update, DigComp 2.1, provides updates to the *proficiency levels* (Dimension 3) and *new examples of use* (Dimension 5).

The proficiency of competences initially described in DigComp 1.0 involved three levels: A) foundation, B) intermediate, and C) advanced. Each of these levels was described in accordance to each competence. In DigComp 2.1, this is expanded to eight levels, organized into four main descriptors with two levels each: foundation 1 and 2, intermediate 3 and 4, advanced 5 and 6, and highly-specialized 7 and 8. Each of these involves the complexity of the tasks, the autonomy of the user, and the cognitive domain.

Dimension 4 of the framework, as described in DigComp 1.0, provides *examples of knowledge, skills, and attitudes* for each competence described. For instance, for competence 2.1 (*Interacting through technologies*), the document provides, amongst others, the following examples of knowledge: being “aware of different digital communication means” and “know[ing] the benefits and limits of different means of communications and distinguish[ing] the most appropriate ones to the context” (DigComp 1.0, p.19). It is clear that these notions are of great importance for language learners, and although they have already been addressed in some way in English language classrooms, there is evidence that much more needs to be

done in this direction. The biggest challenge seems to remain in connecting the use of technology with education in a more significant and efficient way.

Other examples of skills pertinent for the same competence (*Interacting through technologies*), states that an individual should be able to: send an email and an SMS; write a blog post; find and contact peers; edit information to communicate it through several means; evaluate their audience and tailor communication according to audience; and, filter the communication they receive (DigComp 1.0, 2013). All of these skills are essential for foreign language learners in general, and may be supported by the opportunities the Web 2.0 brings to the English language classroom.

Finally, the attitudes related to this competence (*Interacting through technologies*), are illustrated as referring to someone who is not only confident and comfortable in communicating and expressing themselves through digital media, but who is also aware of the code of conduct appropriate to the context, and of the risks associated with online communication with strangers. Moreover, this person should be actively engaged in online communication and willing to select the most appropriate communication means according to the purpose (DigComp 1.0). In order to become confident and comfortable to communicate through digital media, one needs to practice and develop skills. The language teacher, therefore, plays a central role in guiding students through this process.

It is also important to note that in Dimension 5 (*Examples of use*), examples of applicability are provided for the purpose of learning and employment. While in DigComp 1.0 examples for each one of the three levels of proficiency are provided, in DigComp 2.1, the examples for the eight levels are instead provided only for competence 1.1 (*Browsing, searching, filtering data information and digital content*) and for the other competences it is provided only one example per each level. It is explained that the document “[does] not provide examples for all the proficiency levels, because the nature of the framework is descriptive and their aim is to illustrate the proficiency levels” (DigComp 2.1, p. 17).

For the abovementioned competence 2.1 - *Interacting through technologies*, for instance, one of the examples provided for Intermediate level 3 in a learning context explains that the students should be able to “use a commonly-used chat on [their] smartphone” and “to talk to [their] classmates and organise group work.” (DigComp 2.1, Competence Area 2 – Examples of Use 2). In this sense, it may be possible to say that by providing students with some language chunks and tips, the English teacher can encourage them to organize group work via chats using their own phones or a computer, and guide them through this process.

DigComp Org

Similarly, the purpose of the DigCompOrg (Kampylis, Punie & Devine, 2015) is to offer support to educational organizations throughout the process of integrating digital resources in learning. The framework is organized into seven main areas which are common in the educational sector: *leadership and governance practices; teaching and learning practices; professional development; assessment practices; content and curricula; collaboration and networking; and infrastructure.*

The area of *leadership and governance practices* refers to the strategic plan for educational institutions to include digital learning technologies. At the same time, these organizations should strongly support and provide *professional development* to their staff, in order to create and integrate new digital tools. *Infrastructure* is likewise another significant area in which to achieve successful practices with digital learning technologies.

The other four elements discussed in the framework – *teaching and learning practices; assessment practices; content and curricula; and collaboration and networking* – seem to be of great importance for the present study, as they are closely related to teachers and the learning processes; therefore, they are briefly discussed below.

The area of *teaching and learning practices* mentioned in the framework encompasses two sub-elements. One refers to the promotion and assessment of digital competences. It emphasizes the importance for students and staff to demonstrate digital literacies, and that the institutions themselves should also take care of the wellbeing and safety of their staff and students when dealing with digital resources. In this sense, it is important that teachers become aware of the risks involved in using digital tools for learning purposes, so that they are prepared to guide students to benefit more from the integration of such tools while learning.

The second element related to teaching and learning practices involves rethinking roles and pedagogical approaches. This element, while involving teachers directly, needs to be strongly supported by the institution, their policies, and their practices. In this sense, emphasis is placed on the importance of all educational team members working in an integrated way, where roles need to be re-established and where everyone needs to be seen as a facilitator of the learning process, as well as role models for lifelong learning. The role of students has also changed; since the pedagogical approach should be student-centered, learners are expected to engage and participate in the learning process (DigComp Org, p. 24). As for the pedagogical approach, the document establishes that teaching practices should be

“flexible, adaptable, and engaging” (ibid.) Additionally, more personalized learning, along with creativity and collaboration, need to be encouraged and supported by educational organizations. Another point of crucial importance is the need to promote and support social and emotional skills. These are considered as the abilities to “understand and manage emotions, set and achieve positive goals, feel and show empathy for others, establish and maintain positive relationships, and make responsible decisions” with the intention of learning “how such skills can be applied in digital and online environments” (ibid.).

As for the *assessment* area, it includes the main actions institutions should take in order to move from the traditional assessment model towards “a more comprehensive repertoire of practices” (ibid., p. 26). It includes “student-centred, personalised, authentic, integrated and meaningful assessment practices” (ibid.), which take into consideration not only formal learning, but also knowledge acquired in more informal settings. This element comprises three subsections, which describe assessment as engaging and motivating, the fact that it should recognize formal and non-formal learning, and that it should also use data collected from digital learning technologies to improve learning practices, outcomes, and the curriculum.

Next, the *content and curricula* area includes two other sub-elements, and although in many contexts teachers, in general, may not be directly responsible for reviewing and updating the curricula, they are the ones who are in charge of translating them into practice. Therefore, organizations should promote, facilitate, and encourage the use of digital content by teachers and students from different places. Consequently, the curricula should be redesigned and reinterpreted to include the “pedagogical possibilities afforded by digital technologies” (DigComp Org, p. 28), and students may even have an active role as co-designers.

Lastly, the *collaboration and networking* area involves not only students, but also staff. According to DigComp Org, educational organizations should promote a collaborative environment among their staff and students, who engage in communication both outside and inside the organization. It encompasses three other sub-elements, which emphasize that in addition to promoting networking, sharing, and collaboration, the institution should also develop a strategic approach towards communication and develop partnerships to work collaboratively.

Although DigCompOrg aims to provide a wider plan and discussion for educational institutions, it also offers some important topics that teachers may bear in mind when including digital resources in their lessons. For English language lessons in particular,

considering the time and current curriculum constraints, teachers and coordinators should be encouraged to work together to identify the best solutions for integrating digital tools into the English language curriculum.

Technology and language learning

The document related to the use of technology in language learning, issued by the EC, dates from 2014 and is entitled *Improving the effectiveness of language learning: CLIL and computer assisted language learning* (Scott & Beadle, 2014). It is a report that draws upon a literature review of the use of CLIL and CALL, by providing data which involve the development of language skills (listening, writing, speaking, and reading) and learner's motivation.

In the case of CALL, it refers to language learning supported by the use of technology. Although it does not make a clear reference to Web 2.0, it is clearly possible to identify different aspects linked to Internet use in general. The report clarifies that although it refers to 'computers', this also includes smartphones, tablets, MP3 players, and consoles, which highlights the importance of mobility. Additionally, some important aspects involving CALL are outlined: the ease of obtaining authentic materials (videos, podcasts, animations, news); online environments where learners can communicate (text messages, email, social media); language learning tools (grammars, dictionaries); virtual learning environments; and games.

There are two types of CALL, one that supports a more traditional approach to foreign language teaching, and another, which offers more innovative methods. The second type of CALL, which is the focus of this study, involves a high interaction between the learner and the computer, which puts an emphasis on the user as a developer, and is associated with more creative, high-complex tasks (Scott & Beadle, 2014) and elements that are closely related to Web 2.0 use.

By providing an overview of several studies (e.g. Baturay et al., 2009; Casado & García, 2000; Dourda et al., 2013; Golonka et al., 2014; Kongrith & Maddux, 2005; Mendelson, 2010), and despite some limitations, it is recognized that technology use can have a positive impact on different aspects of language learning. Examples of such advantages include gains in speaking, reading comprehension, vocabulary, grammar, and fluency through intelligent tutor systems (programs that simulate a tutor and provide instructions and feedback); and the improvement in pronunciation with the use of Automatic Speech

Recognition (ASR)¹⁴. Since students are able to practice alone, they seem to feel more comfortable in doing so, instead of practicing in front of their peers or teachers (Casado & García, 2000).

Additionally, it has been shown that digital game-based learning can help as well improve foreign language learning in many ways. The advantages include, for example, entertaining learning, knowledge contextualization, problem solving and critical thinking development, interaction and negotiation of meaning, improvement in reading skills, retention of vocabulary, motivation, and collaboration (Dourda, Bratitsis, Griva & Papadopoulou, 2014).

Chatting is another technological resource that has been shown to improve speaking skills. Chatting tools (either written or with audio) are believed to increase the complexity of language used by students and also the amount of language they produce (Golonka et al., 2014).

Other studies mentioned in the CALL report that discuss the use of text-based Computer-Mediated Communication (CMC) found that in addition to focusing on formal aspects of language, CMC also supports collaborative work (Alwi, Adams & Newton, 2012) and improves the retention of words (Baturay et al., 2009).

Another considerable advantage stressed is that online multimedia resources provide learners with the possibility to extend their learning environment outside the classroom. In this respect, mobility is undoubtedly one of the greatest aspects of which teachers can take advantage of by assigning, for instance, more creative, interesting, and interactive homework. Furthermore, as the students are central to their own learning, certain digital tools may make them more aware of their own responsibilities in the learning process, and in their own development and improvement.

Increasing motivation and confidence are also positive points mentioned in the CALL report. It is pointed out that technology can make learning more fun and interesting, it can reduce anxiety (by promoting a more independent learning environment), it can improve cultural awareness (by facilitating contact with other cultures), and it can improve competences of learners with different learning styles (by promoting student-centered learning and encouraging self-monitoring).

Bearing in mind what has been discussed so far, it is recognized that “effective use of CALL depends on teachers’ ability to understand and integrate the use of the applications in

¹⁴ ASR are systems that convert speech from a recorded audio signal into text.

their curricula” (Scott. & Beadle, 2014, p. 19). In this sense, it becomes increasingly clear that teacher training programs and support are crucial.

It is also important to note that it is suggested in the report that it may be necessary to balance technological resources with more traditional tasks and materials, especially when Internet access to irrelevant material can distract students. Therefore, although it is acknowledged that using technology in the language classroom brings many benefits to language learning, it is also true that it is only accomplished when technology is appropriately applied.

To sum up, the documents and frameworks issued by the EC may shed some light on how to address and deal with technology in the classroom; however, continuous staff training and investment in infrastructures are clearly essential to successfully achieve the established goals.

3.2. The Portuguese context

The frameworks and documents on digital competences issued by the EC establish the general points and elements for the EU context. However, bearing in mind the specificities of each country, it is certainly expected that each member state establishes its own policies, goals, and initiatives according to their citizens’ specific national needs.

In this sense, the Portuguese government has acknowledged the need to establish policies and goals concerning digital competences, as well as to integrate digital resources in a more active and significant way in education. One of the most important initiatives recently announced is the National Digital Competence Initiative, e.2030 (*Iniciativa Nacional Competências Digitais e.2030 – INCoDe.2030*), which describes the challenges, goals, and actions to be taken into consideration to develop digital competences among Portuguese citizens.

INCoDe.2030

The INCoDe.2030 was launched in March 2017; it is based on the core principles of the DigComp versions and describes the digital competence goals to be achieved in Portugal between 2017 and 2030. In general terms, it aims to establish public policies that support and encourage the development of digital competences among Portuguese citizens.

According to the INCoDe.2030, Portugal currently occupies the 15th position in the Digital Economy & Society Index (DESI – 2017). This index summarizes several indicators

on digital performance across EU member states, and although the points achieved by Portugal are considered within the European median, the Portuguese government recognizes the need to implement more clear objectives and goals. As noted in the INCoDe.2030, developing digital competences is crucial for Portuguese citizens, especially among younger generations, so that they are able to actively engage in contemporary and future societies.

The document describes what is understood as digital competences and clarifies that it encompasses not only digital literacies, but also the research and production of new knowledge. It is also important to mention that the term digital literacies, in this context, means the ability to access digital environments and ICT, to understand and critically assess content, and to communicate effectively (INCoDe.2030).

Therefore, INCoDe.2030 is founded on the following five main domains: *processing information; communication and collaboration; development of digital content; safety and privacy; and the use of technology to develop solutions for different issues* (ibid.). Additionally, for each one of these areas, similarly to DigComp, four levels of proficiencies are established: basic, intermediate, professional, and advanced.

The levels of proficiency can be quite relevant to further verify to what extent the citizens are digitally literate. According to statistical data provided in 2016, 52% of the Portuguese population between 16 and 74 years old did not have the basic digital competences to access the Internet, and 26% of the citizens within the same age group said they had never accessed the world wide web. Consequently, it is clear that not only should measures be taken to spread Internet access, but citizens also need to become more skilled in order to benefit most from it.

In this sense, to support the development of digital literacy, three primary challenges are stressed which should be overcome by 2030. In general terms, the first challenge is *to popularize digital literacies in order to promote inclusion*. The second involves the *promotion of employment and professional training in digital technologies*. Finally, the third challenge is *to ensure increased participation in international research and development*, and in the production of knowledge relevant for areas related to digital technologies. In order to address these challenges, as well as the goals established regarding access to technology, human potential, use, investment, training and certification, a number of measures engaging different governmental bodies are proposed. These measures are organized within five main principles: *inclusion, education, qualification, specialization, and research*.

In order to provide more specific information on how to overcome each challenge, a number of objectives, as well as the actions that should be taken to meet these objectives, are

given. Each one of the challenges seems to be in some way related to education; however, the first challenge (*the popularization of digital literacies*) seems to be more strictly related to learning itself, as it is further discussed below.

The first challenge includes three objectives: a) to support and encourage the development of digital competences in all levels of education, including lifelong learning; b) to support and encourage the acquisition of digital competences through professional training and qualification; and c) to promote new digital competences in public administration and in the interaction with citizens.

Among the actions mentioned, to meet the first objective (a), it is necessary to adopt the concept of multiliteracies which, as explained by Halinen, Harmanen and Mattila (2015), focus on “interpreting, producing and evaluating various kinds and forms of text, which will help the pupils to understand diverse forms of cultural communication and to build their personal identity” (p. 142). The adoption of a multiliteracies approach, as discussed in Chapter 1, is crucial and closely related to the implementation of a digital literacies policy in education. It also supports the idea that being digitally competent goes far beyond knowing how to technically deal with digital tools. Other significant actions to accomplish the first objective include: promoting the use of digital tools to get information and develop creative work; communicating and socializing; and developing critical and analytical thinking. Adult and lifelong learning, as well as citizenship education, are also mentioned as target areas to be supported. Citizenship education in a digital environment also includes Internet safety and copyright issues, which are, as previously discussed, equally central aspects to be developed in relation to digital competences.

The second challenge, which refers to the *promotion of employment and professional training*, aims to meet the increasing need for digitally competent workers. This challenge includes five objectives: a) to mobilize the civil society, and the economic and social actors; b) to support the development of a set of coordinated, diverse, and sustainable actions towards initial and lifelong training in ICT; c) to further support undergraduate studies; d) to intensify advanced lifelong learning programs; and e) to further support graduate studies (INCoDe.2030, p. 16).

In this sense, among the five objectives and different actions proposed to achieve them, it is important to highlight the creation of a national training program in ICT, which targets teachers, educators, and other workers in the sector. While it is recognized that ICT is used by over 50% of professionals in several areas across the EU, it is also acknowledged that this trend will require an increasing need for creative professionals to develop suitable digital

tools and their accurate applicability. Bearing this in mind, education and training are certainly among the areas that have seen an increasing use of new technologies in many ways (ibid.).

The third challenge is related to the intention *to make Portugal engage in international research and development of digital tools*. This challenge includes four objectives: a) to support Portuguese citizens in international scientific organizations; b) to further support a scientific and technological agenda in the Mediterranean Zone; c) to stimulate a data and information storage network; and d) to prepare researchers and the new generations of researchers in the context of ‘open science’. (ibid., p. 17).

As explained above, the set of measures proposed to overcome the abovementioned challenges are based on the following five main principles: *inclusion, education, qualification, specialization, and investigation*. Although it is clear that these principles can be in some way related to education, it seems essential to highlight what is specifically described for education itself.

As argued in the INCoDe.2030, the principle of *education* aims to support and ensure education and training in digital literacies, not only for the younger generations throughout their school lives, but also throughout their lifelong learning (ibid., p. 19¹⁵). Therefore, it is in the country’s best interest to ensure that its younger citizens receive training in new technologies, so to stimulate their digital literacies and competences. Consequently, the Directorate-General for Education (Direção Geral da Educação – DGE) and the Directorate-General for Higher Education (Direção Geral de Ensino Superior – DGES) are in charge of organizing and taking action in the following five main areas: promoting pedagogical innovation in learning and teaching processes; developing digital educational resources; training teachers in preschool, basic, and secondary education; promoting and spreading coding, robotics and digital literacies; and using digital technologies in inclusion contexts, aiming to meet the specific needs of students.

¹⁵ In the original text, this principle establishes that it is important to guarantee the education of young citizens by supporting digital literacies and digital competences throughout their lives: “assegurar a educação das camadas mais jovens da população através do estímulo e reforço nos domínios da literacia digital e das competências digitais em todos os ciclos de ensino e de aprendizagem ao longo da vida” (INCoDe.2030, p. 19).

English language syllabi¹⁶ and the use of technology

Basic education in Portugal comprises nine years that are divided into three cycles: first cycle, Years 1 to 4; second cycle, Years 5 and 6; and third cycle, Years 7 to 9. English language learning is currently required from Year 3 of the first cycle. The decision was implemented in 2015, making English a compulsory subject for seven consecutive years, i.e., up until Year 9.

Secondary education, on the other hand, is organized into five areas: scientific-humanistic education; technological education; specialized artistic education; professional education; and vocational training. A foreign language is compulsory in Years 10 and 11 for students enrolled in the first two areas. Although English is just one of the options available (along with German, Spanish, French, and Mandarin), it is certainly the most chosen one. Students enrolled in Language and Literature Studies, which is part of the scientific-humanistic area, may continue to study English in Year 12. Since this dissertation focuses on the third cycle and secondary education, a brief discussion focusing on the multimodal and digital literacies aspects of the English syllabi for these years of education are now presented.

Taking into consideration the English syllabus for the third cycle of basic education (*Programa de Inglês – Programa e Organização Curricular*) issued by the Ministry of Education, it basically focuses on the linguistic aspects that should be addressed in Years 7, 8, and 9. Since it is a document issued in 1995, it does not include any section that specifies the use of technology in the classroom. However, some excerpts may provide a few ideas or insights for teachers on how to incorporate digital tools to improve students' learning.

The objectives concerning the communicative approach, on which the syllabus is based on, involves six competences: *linguistic*, *discursive*, *strategic*, *sociolinguistic*, *intercultural*, and *processual*. As has been discussed throughout this dissertation, the use of new technologies, and especially the Web 2.0, seems to offer great opportunities and possibilities to support the development of the linguistic, discursive, sociolinguistic, and intercultural competences. Additionally, even strategic and processual competences may be easily integrated with a pedagogical approach involving digital literacies in English language classrooms. Students may be interested in learning, for example, how to create a simple web page or a blog, and could do so by following the instructions on a website written in English, or from a video on YouTube. Although the objective would be to build a blog, linguistic

¹⁶ The document entitled Curricular Goals in English Language (*Metas curriculares de Inglês*) has not been discussed, since it does not mention any aspects related to the use of technology.

aspects could also be (re)viewed, such as technology-related vocabulary, verb tenses, the semiotic modes articulated in the construction of the web page, and so on.

The use of the Web 2.0 can also support the achievement of the objectives established for the third cycle. It is unquestionable, as previously discussed, that the vast amount of different kinds of authentic texts that the Internet makes easily available can support and promote the learning of the English language. It is true, however, that to select and make this material suitable for use in the classroom, as well as to meet the learning objectives, can be a challenge for teachers. Although some tools may help teachers in this task, as described in Chapter 2, it seems much more needs to be done.

Intercultural aspects, interaction, and participation by giving opinions, which are intrinsic in the three other objectives of the English syllabus for the third cycle, can be widely promoted with the use of new technologies and the Web 2.0. As has been shown, the most important aspect of the Web 2.0 is the interaction it provides. Therefore, contacting someone from a different country and with similar interests is increasingly easy. However, it is crucial to emphasize once more that being in contact with other people may pose threats to young students, so it is imperative to adopt a pedagogical digital literacy approach.

In interactions, and when sharing their opinions, students are asked to be aware of both cultural and social aspects. In this sense, the Internet may also provide many tools to support collaborative learning, which promotes the objective related to responsibility, cooperation, and solidarity, as can be seen when the syllabus states: “integrar e desenvolver na sua prática atitudes de responsabilidade, cooperação e solidariedade” (Ministry of Education, 1995, p. 9).

These are just a few examples demonstrating that although the third cycle syllabus does not refer to the use of technology, this does not mean that it is not possible to integrate technology, in order to meet the learning objectives established. However, it crucial to stress that a review of this syllabus is necessary, so to provide teachers with guidance on how to use technology to meet those learning objectives.

Examining the current English syllabus for secondary education in Portugal (*Programa de Inglês – Nível de Continuação, Formação Específica*), although being a later document issued in 2003, it can be considered outdated regarding the use of digital tools in English classrooms. Although there are some direct indications about the use of technology in English lessons, they are not specific and do not provide much guidance for teachers. Therefore, it is important to bear in mind that these indications do not exclude or limit the

possibilities that the use of technology, and especially of the Internet, may bring to different aspects of the learning and teaching processes.

In fact, indications of the use of technology and a multimodal approach in the syllabus are very simple and general. For example, among the purposes listed, there is an item stating that a media education should be encouraged and addressed through the critical interpretation and analysis of texts spread by means of the different public means of communication. In order to meet this purpose, a multimodal approach to texts could be encouraged and promoted in the classroom. Moreover, all the other purposes mentioned, such as contact with different cultures, improvement of linguistic skills, and interaction, can always be enhanced by using technology that is supported by a multimodal approach, as previously discussed.

It is interesting to note, however, that among the objectives to be met in secondary education is the use and development of ICT. Therefore, it becomes clear that simply knowing the language and its systems is not enough when learning a foreign language; it is necessary to know how to use new technologies, as well as understand and make meaning through them. In this sense, a comprehensive approach to English learning and teaching is encouraged. In addition to those objectives, which are related more closely to formal aspects of the language, others, such as the use of technology, although being considered transversal goals in the syllabus, are assumed to have a direct impact on methodological and assessment practices.

In relation to ICT, it seems relevant to briefly discuss the Learning Goals in ICT (*Metas de Aprendizagem na área das TIC*), a project of the Ministry of Education issued in 2010. Its objective is to identify how school subjects and digital technologies can be integrated. The aim is to offer some guidance to teachers concerning the competences the students should demonstrate at the end of each study cycle of basic (first, second, and third cycles) and secondary education (Costa, 2011).

The Learning Goals in ICT document (Costa, Cruz, Soares & Fadrão, 2010) is organized into four domains: *information*, *communication*, *production*, and *safety*. In each domain, learning goals are established for the students, from preschool to basic education (first, second, and third cycles)¹⁷. The learning goals in ICT for the third cycle are briefly described below.

¹⁷ The document currently available at <http://repositorio.ul.pt/handle/10451/6567> (Accessed on: August 30th, 2017), describes the learning goals for pre-school and basic education and no further information has been found regarding the learning goals in ICT for secondary education on the website <http://metasdeaprendizagem.dge.mec.pt/metasdeaprendizagem.dge.mec.pt/ensino-secundario/apresentacao/index.html>. (Accessed on: August 30th, 2017).

By the end of Year 9 (third cycle), student should be able to: 1) use online and offline digital resources to do research with defined criteria (information domain); 2) communicate, interact and share information using network systems they are able to select considering their potentials and limitations (communication domain); 3) create original schoolwork and projects using digital tools to express their knowledge, feelings, and ideas (production domain); 4) respect copyright and intellectual property, and behave properly in digital environments (safety domain). In addition to these goals, there are also intermediate goals within each domain, which should be met before the end of Year 9 and developed over the three years of the third cycle. These four goals seem to offer great possibilities for integration in EFL classrooms. Furthermore, the document also provides strategies to integrate the ICT learning goals with other subjects' learning goals. In this sense, Strategy number 8 focuses on the integration of ICT goals and English language learning, and proposes activities that teachers can develop with their students.

Additionally, it is worth mentioning that as a school subject, ICT is compulsory only in Years 7 and 8¹⁸ of basic education (and it is optional in the first cycle – Years 1 to 4, and in some areas of secondary education) (ANPRI, 2016). In this respect, with the aim of establishing the key points the students should learn during these two compulsory years pertaining to this area, in 2012 the Portuguese government issued the Curricular Goals for ICT (*Metas Curriculares das TIC*) (Horta; Mendonça & Nascimento, 2012).

The ICT Curricular Goals stress the importance of developing a comprehensive digital literacy, which goes beyond basic digital competences. Moreover, it points out that it is crucial to foster the development of critical thinking in students and to promote the competences that enable them to become critical and responsible consumers of information by using different technologies.

It becomes clear that it is essential to train students in digital technologies, but more importantly, to train them to become autonomous users, consumers and producers of information, as well as critical thinkers. In this sense, critical literacy and multimodal literacy seem to be extremely necessary for the development of digital competences, as described in the documents discussed in this chapter and the theories that support the multiple literacies examined in this dissertation.

¹⁸ The redesign and introduction of ICT as a school subject in second and third cycles of basic education (from Year 5 to Year 9) is expected to happen in 2018/2019, according to information provided on the website of the Portuguese Association for the Development of Communication (*Associação Portuguesa para o Desenvolvimento das Comunicações – APDC*). Retrieved September 1st, 2017 from <http://www.apdc.pt/noticias/atualidade-nacional/tic-e-programacao-chegam-ao-ensino-basico/>.

Summing up, as the documents concerning the English language curriculum do not currently effectively integrate the use of technology, and considering all the policies and guidelines that have been issued and are under discussion in Europe and Portugal, it is expected that in the coming years, the Portuguese government and the Ministry of Education will incorporate technological tools in a more comprehensive and effective way in English classrooms. Additionally, it is important that both teachers and students are engaged in the designing of a new curriculum, or in updating it, as proposed by the EC. In this sense, a wide discussion among many sectors of society seems necessary to achieve the national objectives, as proposed by the INCoDe.2030 and the community goals set by the EC.

All in all, a comprehensive discussion involving professionals across different areas is essential, especially because there are concerns about the use of technology in language learning that should not be ignored, in spite of the many unquestionably positive impacts. Issues such as student's increasing distraction, cyberbullying, consumerism, isolation, depression, freely available inappropriate content, and individual safety, have been topics of discussion in the press and among parents and educators, and must be taken into consideration when planning and designing standards, curricula, and policies.

Chapter summary

The purpose of this chapter was to provide an overview of the initiatives and proposals about digital competences that are under discussion in Europe and Portugal. It was organized into two main parts focusing on the discussion of documents issued by the EC, specifically DigComp, DigCompOrg and CALL report, and the INCoDe.2030 initiative proposed by the Portuguese government.

The English syllabi for the third cycle and secondary education was also analyzed. Although they do not explicitly address the use of technology in the classroom, they were considered, in order to provide some general comments and insights into the possible use of technology in English language classrooms.

It was concluded that in spite of the initiatives and proposals, it is clear that a further, comprehensive discussion involving many sectors of society is required, so to effectively implement policies and curricula, which integrate the use of new technologies in Portuguese English language classrooms.

In order to verify the current use of technology in English language classrooms of the third cycle and secondary education, a questionnaire has been sent to the teachers of these educational levels. Thus, Chapter 4 provides a detailed explanation of the methodology applied in this particular survey, and in the present study in general

Chapter 4

Research objectives and methodology

Having discussed the theoretical background concerning the use of technology in education, and having briefly looked at the documents and the English syllabi in Portugal, it is clear that it is necessary to investigate teachers' positions and approaches concerning the use of digital tools in Portuguese EFL classrooms. Although the English syllabi for the third cycle of basic education and secondary education do not provide details on the use of technology in the classroom, it seems that many teachers do, in fact, include digital tools in their lessons. In this sense, a survey was designed and sent to English teachers so to gain a general overview of their opinions and ideas on the use of digital tools.

The purpose of this chapter is to detail the methodology applied in this study. In order to do so, the first part provides the reasons for this research, the research questions and their objectives, followed by a discussion of the research context. Finally, the questionnaire sent to teachers is presented with a discussion on the objectives of each question.

4.1. Research questions and objectives

The aim of this study is to verify if and how new technologies, especially the Web 2.0, have been used in English classrooms in Portugal, by taking into consideration a group of EFL teachers who responded to a survey. Also, as the use of new technologies is linked to a multimodal and multiliteracies approach, the intention is likewise to verify if texts have been explored through a multimodal perspective in English classrooms. In this sense, the present study aims to answer the following questions:

1. Have new technologies, and more specifically the Web 2.0, been used in English classrooms of the third cycle and secondary education in Portugal?
2. If so, how have these technologies been used?
 - a. Have they been used in a way that promotes a multimodal and multiliteracies approach?
 - b. Have teachers considered them helpful in improving language skills and meeting the learning objectives?

These questions attempt to describe the contribution new technologies have made to English lessons and how teachers deal with them. Moreover, by answering these questions, it is expected to be possible to outline and identify some primary drawbacks and potential issues in integrating technology into English language learning. Therefore, based on these questions, it is possible to establish the following objectives for this research:

1. To analyze how technology, and more specifically the Web 2.0, has been used in English classrooms.
2. To analyze if and how technological tools have been used to develop a multimodal and multiliteracies approach.
3. To verify if technology is considered useful to develop language skills and how.

By answering the research questions and analyzing the aspects described in the objectives, it may be possible to provide data for future research, so to help teachers and educators more effectively implement new technologies in English language classrooms.

4.2. Research context

The context of this study is restricted to the Portuguese setting, more specifically, to English as a foreign language in the third cycle and in secondary education. Although new technologies may be a part of children's daily lives from a very early age, the effects and benefits of technology among young learners have not yet been well established. Thus, any effects or benefits would require another theoretical and pedagogical approach to be considered in the present research. Therefore, the focus of this particular study is on upper basic and secondary education, firstly because of the popularity of digital tools among pre-adolescents and adolescents, but also because in this phase of their studies, learners are being particularly prepared for their professional lives, in which the demand for digitally-skilled people is increasingly relevant.

The choice to investigate the educational levels mentioned, focusing on adolescents and the use of technology, is also supported by relevant data from previous research. For instance, a cross-country study conducted by Sozio et al. (2015), in Brazil and seven European countries (Portugal, Belgium, Denmark, Ireland, Italy, Romania, and the UK), concerning the use of the Internet by children and adolescents, between the ages of 9 and 16, revealed some relevant data. The study found visiting social networking websites and watching video clips to be the most favored online activities among teens between the ages of

11 and 16 across all countries. Additionally, teens' homes are the most common location for Internet use in all the countries studied. These data may therefore evidence the fact that technology is not commonly used at school, and that an effective integration between learning and digital life is required.

Thus, in order to investigate the use of technology in English language classrooms, a survey has been conducted among EFL teachers in the educational levels mentioned. The survey was created on an online platform, and was posted on social media websites as well as sent via email to teachers across mainland Portugal and the islands (Azores and Madeira).

4.3. The questionnaire

Questionnaires are widely used in scientific research and have become very popular, especially in Social Sciences. According to Dörnyei and Taguchi (2010), they are also the most popular method of data collection in second language research. The authors explain that “[t]he popularity of questionnaires is due to the fact that they are easy to construct, extremely versatile, and uniquely capable of gathering a large amount of information quickly in a form that is readily processable” (Dörnyei & Taguchi, 2010, p. xiii). In this sense, cost-effectiveness is one of the greatest advantages of questionnaires. This method enables researchers to collect a huge amount of data in a short time, with little effort, and minimum financial resources. Moreover, it can usually be administered to many people at the same time and can be used to investigate a variety of subjects (*ibid.*, p. 6). Additionally, with online survey platforms, creating a questionnaire and making it available for a large number of people in a few minutes is becoming increasingly easier.

However, as with any method of research, it has its disadvantages. For example, answers are usually simple and superficial, some can be unreliable due to a respondent's lack of motivation or misunderstanding of a question, and it is not usually possible to double-check respondents' answers. Another important limitation of questionnaires is that in some cases, answers do not reflect what the respondents actually do or feel (*ibid.*). Similarly, in the case of an online questionnaire, it is impossible to guarantee that all participants answer the questions on their own, without interruptions or with minimal distractions. In the case of this particular survey, it is neither possible to verify that the answers provided actually reflect teachers' practices in their classrooms. Since the main goal of this study is to provide an overview of the use of technology in EFL classrooms, other methods that would require more time and further analysis (such as interviews or practice observation) do not seem very useful

at this moment and were discarded. After considering all the pros and cons, the method of data collection chosen for this research consisted of the distribution of an online questionnaire (see the Appendix for a printed version of the questionnaire) to English teachers in the targeted educational levels.

As this study is on the use of technological tools, it seemed reasonable to use an online method to gather data, but more importantly, it allowed teachers from different parts of Portugal to participate in the survey. Moreover, considering the time constraints and busy lives teachers currently face, the online survey allowed them to answer the questions in their free time. Finally, data analysis is also facilitated when using online survey tools.

The platform used for the survey was www.freeonlinesurveys.com, which provides for the inclusion of different types of questions, namely: checklists; multiple-choice responses; ranking questions; and Likert scales. The questionnaire was designed so all the questions required an answer; thus, it was not possible for any question to be skipped.

A link to the survey was sent by email to schools, directly to English teachers, and posted on social media websites, such as Facebook and LinkedIn. The Portuguese Association of Teachers of English (*Associação Portuguesa de Professores de Inglês – APPI*) was also contacted, and they kindly sent the link to other associates, which was of great help in the data collection.

The questionnaire is entitled *Multiliteracies and the Web 2.0 in the EFL classroom*. The choice of such a general title has to do with the fact that no further theoretical information was provided for the teachers, so as not to influence their answers.

The language used in the survey is English, and a brief introductory text was included to provide basic information about the research and the questionnaire teachers were about to answer. Respondents were also informed about the approximate amount of time it would take to complete the survey (about 10-15 minutes), and that the information provided was anonymous.

As for the structure, the questionnaire consists of 16 questions. The number of questions and the amount of time teachers would spend in each part was considered, in order to encourage participants to answer all questions without spending too much time on each one. The questions are organized into three main parts:

- a) The first part is dedicated to ethnographic information about the participants, including the educational degree acquired to teach English. In addition, it includes questions about the facilities and educational tools available in the participant's school and classroom.
- b) The second part is centered on the materials and resources teachers usually use in their lessons, as well as to what extent a multimodal and critical approach is adopted when working with those materials. The last question in this second part is a closed-ended question about the use of technology, so to screen those respondents who do not use technology; those who responded negatively were therefore not required to answer the following questions on the use of technology, so for them, the questionnaire ended with question number 10, and they were automatically directed to the 'thank you' page.
- c) The third part focuses on teachers' impressions and experiences of using technology in their lessons.

Each of these parts are considered individually in the following subsections.

First part: demographic data

The first part of the questionnaire consists of four simple questions to establish the population of the study. In addition to outlining the teacher's profile, this part also intends to verify infrastructure issues that could possibly affect the use of new technologies in learning. Thus, respondents were required to answer questions about their:

- Age group – Question (Q) 1
- Place of teaching – Q2
- Teacher training obtained – Q3
- Level of teaching – Q4
- School and classroom facilities and instruments – Q5

Since the aim of this study is to verify the use of technology in the EFL classroom, it was decided that the ethnographic questions would not ask further specificities. However, the data gathered from these questions may be of considerable relevance when analyzing similarities or differences regarding age or place, for example.

The format of the questions consists of multiple choice questions and checklists, in which multiple answers are permitted.

Second part: materials and approach

The second part of the questionnaire consists of five questions about the materials and resources used during the lessons, and how teachers apply them.

Q6, for example, provides a list of eight types of materials from which teachers are asked to choose all that apply to them; they are also given the opportunity to include any other item they believe is relevant. Although some items, such as audio clips and textbooks, are hugely popular in the language classroom, the use of other resources can be very difficult to predict. The purpose of this question is simply to verify which materials teachers most commonly use.

Q7 could be seen as an extension of Q6, since its aim is to find out to what extent these materials are used. In order to obtain more objective, reliable responses, a five-point Likert scale, ranging from *always* to *never*, was used so that respondents could indicate how often the resources listed in Q6 are used. As respondents were required to choose an answer for each one of the items, those unmarked items in Q6 were checked as *never* in Q7. At first sight, it may seem possible to exclude Q6 and solely work with the answers given in Q7; however, in this case, it would be more difficult to allow teachers to enter items of their own choice, if necessary, and to check the frequency of their use.

As for Q8, it focuses on how teachers explore texts in general. The purpose of this question is to verify if a multimodal approach is usually adopted in English lessons, and what semiotic modes have been considered and developed in conjunction with language. So to get the most reliable and objective answers, no theoretical contextualization has been provided. Instead, a checklist with the semiotic modes most commonly addressed in language lessons was included – layout and fonts, colors, sounds, and gestures. However, teachers could also add any other items they explore in texts with their students, besides written or verbal language. Additionally, the option *none/do not know* was also included, so that respondents who do not identify with any of the previous items could provide a more accurate answer. The relevance of this aspect relies on the multimodal theory described in Chapter 1, and summarized by Jewitt (2013), who explains that multimodality “situates what is written or said alongside all the other modes of communication used – image, gesture, gaze, body

posture, space, and so on – and starts from the point that all make a contribution to meaning” (Jewitt, 2013, p. 3).

In addition to the multimodal approach focused on in Q8, Q9 verifies how teachers feel when critically exploring a text. In this sense, teachers are expected to choose to what extent they agree (or disagree) with six statements based on a Likert scale ranging from *strongly agree* to *strongly disagree*. The six statements provided are presented and discussed below.

- Statement 1: Not only is it important to provide a variety of texts with different topics, but also to critically discuss them.
- Statement 2: Not only should the students express their views in English, they should also take a position on the subject under discussion.
- Statement 3: My students do not feel confident to express their opinions in English.
- Statement 4: I don't feel comfortable and/or confident to discuss certain types of texts or topics.
- Statement 5: Although important, it is not always possible to approach reflexive questions due to time constraints.
- Statement 6: Approaching reflexive questions on different topics is not very important in English lessons.

The purpose of Q9 is to explore whether teachers consider it relevant to approach texts critically during English lessons and to identify some of the major obstacles they may face in doing so. Although these statements do not present every possibility, the intention is not to restrict the different concerns teachers may have when approaching a text critically with teenagers. Instead, in order to obtain more accurate and precise data, statements that may be more commonly associated with providing and evaluating critical opinions in a foreign language have been included. This subject could have been further explored through interviews, generating a whole other chapter about critical literacy and its implication in language teaching; however, this is not the scope of this work at the moment.

As discussed throughout this study, critical literacy and multimodality (and therefore technology) are closed linked; in both perspectives, the learner is prompted to read beyond the text. Learning how to critically read a text (written, visual, or spoken) involves much more than decoding written language. In a critical literacy approach, teachers are required to stimulate the students to explore, reflect, and question what is beyond or 'hidden' in a

message, and to question the selections made when choosing signs to produce meaning. This stimulation and learning process is particularly important in modern societies, so that the learner becomes aware of the power relations and ideological ideas that a text conveys. However, as pointed out by some researchers (e.g. Jordão & Fogaça, 2012; Kuo, 2014), sometimes foreign language teachers may question the importance of dealing with critical literacy in a foreign language classroom, and thus, this approach may be marginalized. For this reason, it seems relevant to explore how teachers understand and view critical literacy in EFL classes.

Q10 is included to verify the percentage of teachers who use technology in the classroom. Although it is believed (and afterwards confirmed) that the vast majority of the teachers do, in fact, use at least one or another digital tool, the inclusion of this question aims to confirm this prediction, and also to provide those respondents who do not use technology the opportunity to finish the questionnaire. On the other hand, those teachers who respond affirmatively continue to answer the questions on technology use. Therefore, this last closed-ended question of the second part is used to screen those respondents who do not use technology, as they are not required to continue answering the questions on the use of technology.

Third part: use of technology

Questions 11 to 16 are related to the use of technology in the classroom, focusing mainly on: the communication-related objectives when using technology with students; the tools most used; the beliefs and ideas related to the use of new technologies in the classroom; the language skills most improved through technology; the language learning objectives most developed through technology; and the promotion of digital skills.

To this end, Q11 aims to verify the linguistic purpose for the use of technology, and more specifically the Web 2.0, in the EFL classroom. This question is related to the Communication Standards for Foreign Language Learning in the 21st Century issued by the ACTFL (1996), discussed in Chapter 2. In a drag and drop ranking question, teachers are asked to rank, from 1 to 3, the statements describing the three standard objectives for using technology. It is explained that the objective chosen as number 1 should be the most important, and that objective number 3 should be the least important. The statements the teachers are asked to rank are:

- To make students engage in conversations, exchange opinions, and express feelings.
- To make students understand and interpret written and spoken language on a variety of topics.
- To make students present information, concepts and ideas on a variety of topics.

The first objective listed is related to Standard 1.1, which focuses on interpersonal communication; the second is related to Standard 1.2, where the focus is on the interpretative mode; and finally, the third is linked to Standard 1.3, which emphasizes the presentational mode of communication. As previously mentioned, these standards have been discussed in more detail in Chapter 2 and they further justify the choice to include this question in the survey. Additionally, although many teachers may not be aware of a systematic integration between these standards and the use of technology, it is believed that they are aware of their linguistic and communicative purposes, and they do not strictly base their choice on using digital tools because they are a novelty, nor are they solely used to increase students' motivation.

Q12 provides a list of fifteen popular digital tools from which teachers choose those they use, and they are given the opportunity to insert any others they may commonly use, since there are other digital tools available and others that are constantly being developed every day. The choice of these digital tools is related to the objectives of the communicative standards as described in Q11. This selection is based, up to a certain point, on three articles from the journal *The Language Educator* (Koning, 2013b, 2013b, 2013c), which discuss the integration of the Web 2.0 and the ACTFL communicative standards in foreign language teaching. The selection was made taking into consideration not only some of the digital tools that were provided as examples and suggestions for the development of each mode of communication in each of the abovementioned articles, but also other similar, well-known tools were included in the list. In addition to verifying which tools are most commonly used by teachers, this allows us to see if the objectives chosen in Q11 somehow match the choice of digital tools. Nonetheless, an analysis on the effective use of such tools would only be possible through classroom observation and interviews, which is not the focus of this study at this time.

The list of tools provided include, for example, text messages in general, as well as other tools that are more closely related to the interpersonal mode of communication, such as Skype, Google Hangouts, and WhatsApp. Platforms such as YouTube, Facebook, Edmodo, or

PlayPosit, also provided on the list, may be more closely related to the interpretative mode, although they could be used for the presentational mode as well, or even for interpersonal communication. Other tools and platforms listed include Wikispaces, e-mail, blogs, Google Docs, Google Drive, Prezi, and Twitter, which may be associated with the development of the presentational communicative mode. Furthermore, it is also crucial to bear in mind that almost all the tools presented offer the opportunity for interaction among users and thus, are suitable for practicing interpersonal communication. In fact, all these modes of communication are strictly interconnected with language teaching, so that a clear separation is not always possible, even when working with more traditional pedagogical methods. Also, a cross-data approach with the results from Q12 and Q14 can provide some ideas on the connection between the most developed skills, in the opinion of the teachers, and the tools that they more commonly use in the classroom.

As for Q13, it provides nine statements on the use of new technologies in the classroom. Teachers are asked to what extent they agree with each statement, using a six-point Likert scale ranging from *strongly disagree* to *strongly agree*. The purpose of this question is to verify teachers' perception of technology, based on their daily experience. Therefore, the following statements are presented:

New technologies...

1. motivate students.
2. help in the learning process.
3. help to develop linguistic skills.
4. support a multiliteracies approach.
5. encourage critical thinking.
6. provide new ways of teaching
7. help teacher's work.
8. demand extra work and time from teachers.
9. are not so necessary in English lessons.

It is widely acknowledged that technology improves students' motivation, as pointed out in the CALL report issued by the EC (Scott & Beadle, 2014, pp. 19-28), and as discussed in Chapter 3. Similarly, it is also acknowledged that technology may achieve better learning results if it is not used simply as a motivational tool, but if learning goals, language skills, and so on, are also integrated with the use of digital tools. In this sense, verifying how teachers

perceive the use of technology in the classroom may provide some insights, not only into the use of digital tools, but also into what improvements and adjustments may be necessary when thinking about integrating technology in language lessons.

Additionally, time constraints are an issue commonly reported by language teachers, and digital tools may demand extra work if teachers are not familiar with technological resources, or if they do not know how to effectively integrate these tools with learning goals. The results from Q13 may provide information to further support the need for ongoing training, the development of suitable digital tools for learning, and the need for adjustments to be made in the curriculum, in order to provide more instruction and direction on how integration may become more viable and possible in classrooms.

Moreover, by comparing statements 1) and 9), for example, it is possible to verify if technology has been used mainly to attract students' attention and increase their motivation, or if these tools are considered relevant for other pedagogical reasons. It is certain though that motivation is a significant factor in language learning. Many studies (e.g. Golonka et al., 2014; Casado & García, 2000) have shown that technology plays a major role when it comes to learners' motivation and confidence. However, as pointed out in the CALL report, "The effective use of CALL depends on teachers' ability to understand and integrate the use of the applications in their curricula. Many teachers lack the competence to use them in the classroom and the knowledge about CALL teaching aids" (Scott & Beadle, 2014, p. 24). Additionally, it is explained that different factors may influence how a teacher uses CALL, such as personal knowledge and attitudes, teacher training and professional development, and perceptions of its effectiveness. The data obtained from this question may further support the need for research on how English teachers perceive the use of technology in the classroom, and hence, perhaps conceive ideas on integrated and useful solutions.

The aim of Q14 is to verify which language skills, according to the respondents, can be improved with the use of technology. It is true that some digital tools may provide better results to develop certain skills than others, and this is one of the reasons why a comparison between the answers provided in Q12 – on the types of tools most commonly used – and the language skills best developed may be relevant. For this reason, teachers were asked to rank the following language skills from one to five: listening, reading, writing, speaking, and critical thinking and cultural awareness. It was explained to respondents that number one is the skill they perceive that could be best developed, and number five the skill they believe is the least developed by the use of technology.

As critical thinking and cultural awareness are two closely-related aspects when studying a language, the two have been included together in the same item. As discussed in the previous chapters, especially in Chapters 2 and 3, new technologies, and more specifically the Web 2.0, make it easier to connect with other cultures either through videos, songs, texts, or also by contacting people from different cultures. Moreover, as all these skills are required to communicate effectively in a foreign language, it is useful to identify not only which skill is best developed with the use of digital tools, but also, and more importantly, which skill teachers believe is the least developed.

The findings from this question may help provide general insights about which types of tools are the most suitable to deal with the skills these teachers believe are not as well developed when using technology. Although further research is necessary to better understand and propose effective ways for teachers to address such issues related to language and technology, the data gathered from this type of question may serve as a starting point for further research.

Similar to Q13, Q15 aims to verify teachers' impressions on the use of technology in EFL lessons. However, while Q13 focuses on more specific opinions, Q15 seeks to analyze more general beliefs on that use. Questions 13, 14, and 15 are somewhat related to each other, but Q15 emphasizes other aspects related to the use of technology, for example, its connection with interdisciplinarity. Instead of expressing to what extent respondents agree/disagree, the statements are provided in a checklist form and respondents are required to check those which best reflect their opinion (more than one option can be chosen). Since the objective is primarily to verify teachers' impressions to technology and vocabulary, technology and grammar, technology and interdisciplinarity, technology and character education¹⁹, and technology and culture, no further option is presented. The statements provided are:

1. New technologies can help vocabulary expansion.
2. Grammar is better taught/learned and consolidated through technology resources.
3. It is easier to address interdisciplinarity through technology.
4. New technologies in English class can help character education.
5. Cultural aspects are better explained and shown using new technologies.

¹⁹ Character education refers to the development of a positive character, that is, the promotion of ethical values (including emotional and social) in students for them to become responsible and caring citizens. More information about character education can be found in Lee, G-L. & Manning, M. L. (2013). and Lopes, J., Oliveira, C., Reed, L., Gable, R. A. (2013).

The last question, Q16, verifies which aspects related to digital literacies teachers usually explore with their students. The relevance of addressing digital skills and taking on a multimodal approach to texts has been discussed throughout this dissertation; therefore, four main issues are presented: Internet etiquette; Internet safety; cultural and ideological issues; and characteristics of different digital texts. Undoubtedly, many other items could have been added to this list; however, due to the scope and purpose of this survey and research, more general and commonly approached aspects have been chosen. This does not mean that the other digital skills that have been discussed in the previous chapters are not as important as the ones focused on here. Furthermore, other items were not included as well simply because, in some cases, they would probably require further context, explanation, or the inclusion of different questions, which would extend the survey and possibly discourage teachers from responding.

The items in Q16 are presented on a Likert scale, ranging from *always* to *never*, in which teachers are asked to choose to what extent they focus on these aspects with their students. The data obtained from Q16 may provide insights into how teachers deal with basic digital skills in the EFL classroom, and therefore, could be considered to support further analysis on digital skills in English lessons.

Having taken into close consideration each one of the parts that constitute the questionnaire, it is safe to say that its main purpose is to provide an overview of the most general and, at the same time, most relevant aspects of the use of new technologies, and multimodal and multiliteracies approaches in the EFL classroom. In this sense, the aim of the survey is not to fully understand and draw a detailed picture of the use of digital tools in EFL classrooms in Portugal. Additionally, an extensive study would require more time and space, and would probably involve classroom observation and interviews with students, teachers, and coordinators.

Therefore, despite the existing limitations (as previously mentioned) concerning the use of questionnaires, especially that the answers provided may not reflect teachers' actual practice, the online questionnaire proved to be the best way to collect a great amount of data in a short period.

Having considered all these aspects, it is worth mentioning the conclusions drawn from the data collected in the survey are not representative of the entire community of Portuguese English language teachers working in the third cycle and secondary education; instead, the conclusions are based on the answers gathered from this specific group of teachers and only refer to this specific population. However, the results of the survey and the

theoretical background provided in this study are both suitable and useful to provide general insights and ideas for further research on this topic.

Chapter summary

The purpose of this chapter was to provide details on the methodology applied in this research. The first part provided the reasons for this study, the research questions and objectives, followed by a discussion of the research context. Afterwards, the survey about teachers' use of technology was presented, as well as its three-part structure: demographics; materials and approach; and use of new technologies. Each of these parts was closely considered, and each question was individually discussed, bearing in mind the theoretical background and the documents presented in the previous chapters.

Finally, the chapter concludes with the idea that although it is far from being a comprehensive and extensive study, the results gathered from the survey, which will be explained in Chapter 5, along with the theoretical discussion from the previous chapters, may provide some insights and encourage further research on the topic.

Chapter 5

Survey analysis and discussion

After presenting and detailing the research methodology in Chapter 4, this chapter is organized into four sections dedicated to the analysis of the survey results from EFL teachers of the third cycle and secondary education across Portugal.

In the first section, the demographic data is presented and briefly discussed in order to establish the profiles of the respondent teachers. In the second and third sections, data from the results related to materials, resources and their use, and the use of technology are provided. Taking into consideration the theories and documents discussed throughout this study, each question is presented according to its results. A brief comment is also provided, the aim of which is to outline some insights into, and ideas about, the teachers' experiences and impressions of the use of technology in the classroom. The final section is dedicated to a general comment taking into consideration the results and the discussion previously presented.

It is also relevant to mention that the questionnaire was made available from February 7th to March 31st, 2017 and, during this period 132 valid responses²⁰ were received, that is, those in which the respondents completed all the required questions in the survey. Additionally, data was treated anonymously and through quantitative analysis, and any potentially identifying information was not associated with the responses.

Finally, it is essential to stress that this is a descriptive study. Therefore, considering the pros and cons of an online questionnaire, as explained in Chapter 4, the data collected and the conclusions discussed herein do not intend to represent the total teacher population working in the third cycle and secondary education. However, it is expected that the results and conclusions drawn from this survey may indicate some tendencies towards the use of technology in EFL classrooms in Portugal and may contribute to developing further studies in the future.

5.1. Demographic data

As for the demographic information gathered, the results from question (Q)1 reveal that almost half of the respondents (48%) are between 41 and 50 years old, while the second most represented age group is that of teachers between 51 and 60 years old (30%). On the other hand, the least represented age group is teachers younger than 30 years old, this group

²⁰ The total number of the responses was 143, but 11 were incomplete and were not considered in the results.

accounts for only 3% of the respondents. Considering this data, the age group most represented in the questionnaire consists of middle-aged teachers over forty years old.

Q2 identifies respondents' teaching location. Although not equal in number, it was possible to gather responses from different parts of the country (see Table 5.1). Respondents from Lisbon and Setúbal represent the main population of the study (27%), followed by teachers who work between the Douro and Minho regions, which correspond to 20% of the respondents. There are also a representative number of teachers from Beira Litoral and the Islands (Madeira and Azores), making up 14% and 13% of the respondents, respectively. In contrast, the Trás os Montes and Alto Douro region has the least number of representatives – only four respondents teach in this area. Considering these results, as expected, the majority of respondents are from the most populous region in Portugal – the Lisbon and Setúbal area.

Teaching location	No. responses (%)
Lisboa e Setúbal	36 (27%)
Entre o Douro e o Minho	27 (20%)
Beira litoral	18 (14%)
Islands	17 (13%)
Alentejo	10 (8%)
Estremadura e Ribatejo	9 (7%)
Beira interior	7 (5%)
Algarve	6 (5%)
Trás os Montes e Alto Douro	4 (3%)
<i>Total responses</i>	<i>132</i>

Table 5.1. Teaching location (Q2)

The following question, Q3, sought to determine the training respondents underwent to become English teachers. The options given are briefly explained below:

- a) *Profissionalização em serviço*: an in-service professional training granted to teachers with at least six consecutive years of practice and who have completed their licensed teaching course and the in-service professional training course.
- b) *Ramo de Formação Educacional*: a pre-service professional training course following an initial undergraduate degree.
- c) *Mestrado em Ensino*: a pre-service professional training course corresponding to a master's degree.

In this regard, the results from Q3 show that the vast majority of the respondents (61%) completed the *Ramo de Formação Educacional*, while 38% acquired the *Profissionalização em serviço*. In contrast, only a small percentage of teachers (6%) did the *Mestrado em Ensino*. This data seems to be consistent not only with the predominant age group in the survey, but also with the laws governing the qualifications and training required for teaching: before 1988 teachers completed the *Profissionalização em Serviço*; from 1988 to 2007 they were required to do *Ramo de Formação Educacional*; and from 2007 onwards, the requirement changed to *Mestrado em Ensino*, with the first course being offered in the 2007-2008 academic school year.

Considering the next question, the objective of Q4 is to determine which level of education respondents teach. The data reveals that almost half (45%) of the respondents teach in both the third cycle and secondary education, while 28% and 27% only teach in the third cycle or only in secondary education, respectively. These figures show that it was possible to reach a balanced number of teachers from both educational levels.

Although not related to individual features, Q5 is also relevant to outline the population in the study, since it aims to verify which tools and resources these teachers have in their schools and classrooms. Not only do the results from this question help to determine the respondent teachers' profiles, but also, and more importantly, they provide information related to the schools' infrastructures, a crucial element when analyzing the use of technology in educational settings.

In this sense, a list of the most relevant items was provided, and the teachers were asked to choose the tools or resources available in their school and classrooms; additionally, they could include other elements, if necessary. The results from Q5 indicate that the overwhelming majority of schools (80-93%) have projectors (93% – the most common tool of all), Internet connection (89%), and computers in their classrooms (80%). Similarly, 72% of the respondents say their schools have a computer room. Interactive boards, although available in 57% of schools, do not seem to be as accessible as computers. On the other hand, tablets are by far the least available items in schools, mentioned by only 16% of the teachers.

Among the additional items listed by respondents, students' cell phones, Edulab, and learning platforms, such as Moodle, were each mentioned once. Although some teachers allow students to use their cell phones during lessons, this item was not included on the list because they are very unlikely to be available in schools for pedagogical use; however, they are certainly an important tool when dealing with technology in the classroom. Similarly, as part of an international pilot project launched in 2014 with the aim of combining technology

and pedagogy, Edulabs²¹ seem to be a new technical resource in schools. The possible classroom use of such an educational ecosystem (as it is named by the consortium in charge – e.xample), and its pedagogical implications are not yet clear and may be explored in the future; therefore, due to a lack of more consolidated information, Edulab is not included in the present study.

In summary, based on the answers from questions 1 to 5, it is possible to outline the general profile of these teachers and their work environment. The majority of those who responded to the survey are between 41 and 60 years old, they teach in Lisbon, Setúbal, or between the Douro and Minho regions, they have completed the *Ramo de Formação Educational*, and teach English in both the third cycle and secondary education. Additionally, at the schools where they work, projectors, computers, and the Internet are the most common resources available.

5.2. Materials, resources, and their use

Having established the respondents' profiles and their workplaces in the first part of the questionnaire, this second part aims to investigate more detailed information on their teaching practices and how they explore materials with their students.

In order to do this, it is first necessary to analyze which types of materials respondents usually adopt in their lessons. Thus, in Q6 teachers had to choose the resources most commonly used in their lessons from a list provided with several options. Additionally, they could include other materials, if needed.

According to the answers provided, audio materials (97%) lead the list as the most popular teaching material among teachers, followed by videos (95%), printed textbooks and photocopied texts (92%). This fact demonstrates, as expected, that the main focus is placed on the communicative approach, as well as on listening and speaking skills, which tend to be the two most difficult skills to master for EFL students.

However, it is essential to highlight that audiovisual resources in foreign language classrooms are extremely common and have been used for many decades in ELT. Although it is unquestionable that the Internet has made it easier to find and use these types of materials, it is not clear whether the teachers who answered the survey usually use audiovisual clips in a more traditional way (e.g. listening to a CD or even a podcast while filling in the blanks in a

²¹ Edulabs are classrooms equipped with software and hardware integrated with learning platforms to be used during the school year. More information about Edulabs can be found at http://www.e-xample.com/CaseStudies/projeto_edulabs (Accessed on July 30th, 2017).

text), or in a more innovative way (e.g. asking students to edit audiovisual clips to create a story or a new product).

No less important, however, projected presentations (e.g. PowerPoint presentations, Prezi) (86%), the Internet for different purposes (84%), digital textbooks and their resources (75%), and traditional games and role play (70%) are also among the resources commonly used by teachers. These data suggest that technology plays a significant role in English language classes, although it seems relevant to highlight that electronic games (27%) do not seem to be a common item in the classroom. As for digital textbooks (and perhaps the consequent use of tablets), it is worth mentioning that this number is expected to increase in the coming years, since the President of the Republic announced a new law on August 2nd, 2017, establishing the extinction of the print-based textbooks and the adoption of digital textbooks in the near future.

Table 5.2 provides an overview of the different materials and resources used. Other materials added by teachers include: authentic printed texts, dictionaries, photographs, and posters.

Resources used in the lessons	No. responses (%)
Audio materials	128 (97%)
Videos	126 (95%)
Printed textbooks and additional photocopied texts	122 (92%)
Projected presentations	113 (86%)
Internet for different purposes	111 (84%)
Digital textbooks and their resources	99 (75%)
Traditional games and role play	93 (70%)
Electronic games	35 (27%)
Other material specified in question 6	17 (13%)

Table 5.2. Resources used in the lesson (Q6)

Moving ahead, the aim of Q7 is to clarify the frequency with which teachers use the materials and resources listed in Q6 (see Table 5.3).

Resource / Frequency	always	usually	sometimes	rarely	never
Audio materials	25 (19%)	79 (60%)	28 (21%)	0	0
Videos	8 (6%)	59 (45%)	54 (41%)	10 (8%)	1 (1%)
Printed textbooks and additional photocopied texts	56 (42%)	56 (42%)	16 (12%)	3 (2%)	1 (1%)
Projected presentations	10 (8%)	45 (34%)	61 (46%)	11 (8%)	5 (4%)
Internet for different purposes	24 (18%)	60 (45%)	35 (27%)	10 (8%)	3 (2%)
Digital textbooks and their resources	25 (19%)	47 (36%)	31 (23%)	16 (12%)	13 (10%)
Traditional games and role play	2 (2%)	27 (20%)	74 (56%)	23 (17%)	6 (5%)
Electronic games	0	5 (4%)	27 (20%)	34 (26%)	66 (50%)
Other material specified in question 6	7 (5%)	23 (17%)	38 (29%)	16 (16%)	48 (36%)

Table 5.3. Frequency of materials used (Q7)

As expected, textbooks and other printed texts are the most frequently used resources, with almost half of the teachers indicating that they always (42%) or usually (42%) use these items. Since textbooks are one of the most frequently used items in EFL classrooms, or at least account for a great percentage of the resources used, it seems crucial that they should include topics or additional resources related to digital skills and activities, and suggest the use of technology for both students and teachers. In fact, many teacher's resource packs nowadays include a variety of additional elements, such as access to specific learning platforms, DVDs with extra activities, and of course, audio material, which is the most common element included in EFL textbooks.

Therefore, and unsurprisingly, audio materials, videos, and the Internet for different purposes are all resources frequently used in English classrooms. It remains unclear, however, if these audio and video files, for example, are authentic materials, or if they are those created for pedagogical purposes to be included in textbook packages.

If textbooks, audio files, videos, and the Internet are the most frequently used resources in EFL classrooms, electronic games are at the bottom of the list as the item least

frequently used in classrooms; 50% of the respondents claiming to never use them. Although some studies (e.g. Dourda et al., 2013; Ya-Hui, Yi-Chun & Huei-Tse, 2013; Wu & Huang, 2017) have demonstrated that digital game-based learning can improve linguistic competences, electronic games do not seem to be very popular among this group of teachers.

There may be several reasons why digital games are almost never used in the EFL classrooms of these teachers. First of all, games usually include different challenging levels, and they are likely to require additional time to be completed. Additionally, many commercially available games are not designed for educational purposes, and teachers may find it difficult to integrate them within their learning objectives. However, as argued by Gee (2003), there are commercially available computer games that could be used to enhance learning and better prepare young people for their future workplaces. This fact may lead to an issue previously discussed, that is the need to invest in training and material preparation for teachers. Certainly, it is not expected that teachers always use digital games in their lessons, but perhaps with suitable training and adequate resources, they may feel encouraged to include digital games with more frequency.

Still on the issue of the use of materials and resources, Q8 was designed in order to verify which semiotic modes – in addition to verbal language – teachers usually explore in their lessons. As already explained in Chapter 4, in this question some of the semiotic modes commonly explored in language lessons were listed for guidance, but teachers were allowed to include other aspects they perceive to be relevant.

As expected, the semiotic mode most explored by teachers is, in addition to verbal language, images (92%), followed by gestures (64%), and sounds (58%). Less than half of the teachers indicated that they also explore layout and fonts (44%), and colors (45%). Only three respondents indicated the option ‘none/do not know’.

One of the respondents included graphs as an additional element that is explored, but it is possible that other respondents who indicated images also explore graphs, charts, and other visual elements in texts. Another teacher included the item songs; however, it remains unclear if he or she was referring to melody and rhythm, for example, or the lyrics in specific.

In summary, based on the answers provided, these teachers are likely to explore the most important semiotic modes that are usually present in contemporary texts. However, how the meanings of these semiotic modes are explored remains unclear. In this sense, it may be possible to state that a multimodal approach towards texts is expected in EFL lessons. While these figures may indicate that these teachers are greatly concerned with developing different perspectives about language and communication, further research would be necessary to

explore how exactly these semiotic modes are explored. Additionally, it is worth mentioning that a multimodal approach is fundamental to further develop different types of literacies, in both traditional and digital texts.

In this respect, it is believed that examining teachers' opinions about critical literacy and how it may be explored in lessons is relevant for this study. Therefore, Q9 has six statements, in which teachers were asked to indicate to what extent they agree or disagree with each of them. The statements are presented below along with their results (Table 5.4).

statement / agreement	strongly agree	partially agree	agree	partially disagree	partially disagree	strongly disagree
Not only is it important to provide a variety of texts with different topics, but also to critically discuss them.	92 (70%)	20 (15%)	19 (14%)	1 (1%)	0	0
Not only should the students express their views in English, they should also take a position on the subject under discussion.	74 (56%)	30 (23%)	22 (17%)	6 (5%)	0	0
My students do not feel confident to express their opinions in English.	21 (16%)	42 (32%)	30 (23%)	15 (11%)	13 (10%)	11 (8%)
I don't feel comfortable and/or confident to discuss certain types of texts or topics.	2 (2%)	14 (11%)	9 (7%)	17 (13%)	40 (30%)	50 (38%)
Although important, it is not always possible to approach reflexive questions due to time constraints.	25 (19%)	40 (30%)	41 (31%)	10 (8%)	12 (9%)	4 (3%)
Approaching reflexive questions on different topics is not very important in English lessons.	1 (1%)	1 (1%)	2 (2%)	16 (12%)	40 (30%)	72 (55%)

Table 5.4. Importance of approaching texts critically (Q9)

As can be seen in Table 5.4, the vast majority of teachers strongly agree (70%) or partially agree (15%) that 'Not only is it important to provide a variety of texts with different topics, but also to critically discuss them,' while only one respondent partially disagrees with this statement. As expected, these figures demonstrate that teachers believe critical thinking is part of language teaching and that it cannot be ignored.

Similarly, the majority of respondents strongly agree (56%), partially agree (23%) or agree (17%) that 'Not only should students express their views in English, they should also take a position on the subject under discussion.' However, 5% partially disagree with this statement. Although this is a small percentage, it demonstrates that some teachers may have concerns about students expressing their opinions about a given topic in English; therefore,

further research would be necessary to clarify their actual reasons. Interestingly, four out of the six respondents who partially disagree with the above statement agree to some extent that their ‘students do not feel confident to express their opinions in English.’ This fact can certainly be an issue, and perhaps one of the reasons why they are not entirely convinced that it is essential for students to express their opinions about different topics in EFL classes.

The general concern related to students’ linguistic confidence is perceived in the answers of the great majority of the teachers – slightly over 70% of the respondents believe, to different extents, that their students do not feel confident in expressing their opinions in English.

Conversely, concerning teachers’ confidence in discussing a variety of topics with their students, the results reveal that for more than 80% of the respondents, this is not an issue (partially disagree – 13%; disagree – 30%; strongly disagree – 38%), while the remaining 20% do not feel the same way. Although the majority of teachers who responded to the survey feel comfortable in dealing with different subjects with their students, the percentage of those who are not so confident should not be ignored. In this sense, by incentivizing teacher training and the development of materials regarding this matter are likely to have a positive impact on their practice.

While confidence in dealing with certain themes and critically approaching texts is not a problem for the majority of this group of teachers, time is shown to be an element of concern. The great majority of the respondents (80% – strongly agree: 19%; partially agree: 30%; agree: 31%) point out that, although important, it is not always possible to approach reflexive questions due to time constraints.

Finally, and in line with the results obtained from the previous statements in Q9, almost all respondents (97%) disagree that approaching reflexive questions on different topics is not very important in English lessons.

Based on the data gathered from Q9, it is possible to establish that, in general, these teachers believe that it is of great importance to explore critical thinking in EFL classes. Moreover, it is also possible to highlight two major obstacles for the majority of the teachers: students’ confidence in expressing themselves in English and time constraints. Teachers’ confidence, as pointed out by 20% of the respondents, should be taken into consideration as well.

In this sense, it is currently widely believed that technology can play a fundamental and supportive role in the development of critical thinking. As shown in some studies, technological tools may help teachers to develop students’ critical thinking in many different

ways (e.g. Dourda et al., 2013; Mohammadkhani, Mazinani, Zandvakili & Fard-Kashani, 2015; Myers & Beach, 2004; Rosen & Tager, 2013). Furthermore, the need to understand and assess content critically and to communicate effectively in contemporary societies has been highlighted throughout this study, and in a variety of papers and documents (Cope & Kalantzis, 2000; DigComp; INCoDe.2030; Luke, 2000; Luke & Dooley, 2011). Therefore, integrating technology effectively into the curriculum, for example, may help teachers save time and improve their confidence, while encouraging and motivating students in the development of critical thinking.

The second part of the questionnaire ends with Q10, in which the aim is basically to filter the respondents who use technology in their lessons from those who do not use it, meaning the latter did not need to continue answering the survey. However, as expected, the huge majority of the respondents, 130 out of the 132, answered that they do in fact use technology in their lessons.

Considering the results from the second part of the survey, these show that audio and video materials, textbooks, and the Internet are the most commonly used resources in the classroom. Also, concerning the different semiotic modes, this group of teachers tends to explore other aspects of texts besides verbal language; however, further research is necessary to establish how this is actually done. In addition to the semiotic modes, critical thinking is another element that is considered of great importance by many of the respondents. However, two major issues have been highlighted: the time limitations to deal with critical and reflexive questions; and students' confidence in expressing their opinions in English. Teachers' confidence in dealing with certain subjects was pointed out by around 20% of the respondents as a matter of concern to varying degrees, and although this does not reflect the feeling of the majority of the respondents, it is a relevant percentage to be taken into consideration.

After establishing the number of teachers who use technology in the classroom, the third part of the questionnaire explores their use of, and beliefs concerning digital tools.

5.3. Use of technology

Questions 11 to 16 aim to uncover the respondents' opinions about technology and its use. In this respect, Q11 introduces the topic by asking teachers what is their most important objectives when using technology in their lessons. As explained in Chapter 4, Q11 seeks to relate the use of technology to the communication standards set by ACTFL, so as to verify the communicative objectives teachers usually have in mind when using digital tools. It is

relevant to mention also that this question was included with the aim of verifying the ‘general’ perception of teachers when they choose to integrate technology in their lessons; however, it is certain that each objective is more or less emphasized depending on the activity performed and/or the digital tool used.

Hence, to the question, ‘Why do you use technology to teach English?’, teachers were required to rank, in order of importance to them, the following objectives from 1 to 3. Although the majority chose the order presented below, it is interesting to note that the presentational mode is by far the least important objective these teachers have in mind when using technology:

- 1) To make students engage in conversations, exchange opinions and express feelings. (interpersonal mode) (57%)
- 2) To make students understand and interpret written and spoken language on a variety of topics. (interpretative mode) (47%)
- 3) To make students present information, concepts and ideas on a variety of topics. (presentational mode) (68%)

As the majority of respondents chose the same order in which these statements were presented, this question was sent once again to those teachers who had included their email address in the questionnaire, so as to rule out the possibility of a technical problem when analyzing this sample of responses. Therefore, an email was sent to 75 teachers, of which 30 replied, and the answers provided confirmed the results initially received.

The results, therefore, obtained in Q11 reinforce the emphasis placed on the development of oral communication and interaction. However, further research is necessary to understand how technology has actually been used to make students engage in conversation. For instance, it would be relevant to verify if digital materials have been employed as input to stimulate conversations, or if they have also been employed to actually communicate. This would mean using tools like Skype or Hangouts to chat, instead of just presenting an online video or a website article with a topic of discussion to encourage students to engage in face-to-face interactions.

Unsurprisingly, the least important objective pointed out by teachers is related to a more effective use of technology, where students are required to know how to manipulate certain digital tools, in order to present their information successfully in written or oral forms. Thus, this use of technology seems to be more strictly related to the development of specific

digital skills, which are necessary when creating/developing information online. Although further research is necessary to confirm this assumption, an integrated approach between digital skills and language would clearly support a more effective use of technology for students to present information. In fact, some studies presented in the report by Scott and Beadle (2014) and issued by the EC, have shown how technology can help develop writing skills, for example, by encouraging self-monitoring and making learners feel more comfortable when producing written texts, in comparison to when they have to speak a second language (Kongrith & Maddux, 2005), and by encouraging collaborative work on language errors during writing tasks (Alwi et al., 2012). Bearing this in mind, it is clear that providing teachers with the technological tools and expertise to further develop students' presentational mode of communication is very relevant.

Aiming to further understand how technology has been used in EFL classrooms, Q12 lists some of the most commonly used digital tools in educational settings. Teachers were required to choose which tools they already use in their lessons and to add any other(s) they consider relevant. Some of these tools are more commonly related to the development of certain communicative objectives than others. For example, Skype can be more related to the development of the presentational or interpersonal modes, as its features allow instant interaction among students, as well as the possibility to present information both orally and visually.

This question further intends to verify if, for instance, the most important communicative objective for teachers may be in some way related to the most used digital tool. However, it is necessary to note that this observation has been made in a very general way, since Web 2.0 tools usually offer many possibilities of use.

Interestingly, the results show that YouTube is the most popular tool, having been indicated as such by 88% of the respondents. The use of this particular website for learning has likewise already been supported by a Croatian study mentioned in the CALL report (Berkec, 2012 as cited in Scott & Beadle, 2014, p. 22). Additionally, as stated in the same report, “[l]earning with video clips enables a different approach to the target language that is fun and spontaneous, because it provides the student with the ability and incentive to express his/her emotions, imagination, experience, and knowledge” (Scott & Beadle, 2014, p. 23).

Additionally, considering that YouTube can be more closely associated with the interpretative mode, and that teachers' responses indicate that technology is primarily used to make students engage in conversations, it is possible to infer that YouTube may be used to

develop the interpretative mode of communication, so as to motivate discussions about certain topics.

Although it was indicated in Q11 that the presentational mode of communication is the least important objective for the use of technology, other popular tools among teachers include: emails (78%); Google Docs (54%); Prezi (46%); Google Drive (43%); Blogs (42%); and text messages (39%). All of these tools can be used to develop writing skills, which is one type of presentational communication. On the other hand, Skype and WhatsApp, for example, which can be used to further promote interpersonal communication, is indicated by only 12% and 10% of the teachers, respectively.

In addition to the tools listed in Q11, 18% of teachers also indicated other digital resources. Among them, the most popular is Kahoot (mentioned by ten respondents), which is a free game-based learning platform, in which teachers can create learning games by adding videos, images, and diagrams, and where it is also possible to choose from a large number of different games created by other users. This result may indicate that, although digital game-based learning is not very popular among the majority of the respondents, some teachers consider digital games a relevant tool.

Following these questions, which inquire about the communicative objectives (Q11) and the digital resources most explored (Q12), Q13 addresses insights and perceptions the teachers may have about technology. In this sense, nine statements were provided concerning what new technologies represent to the participants; they were asked to indicate to what extent they agree or disagree with the ideas. Table 5.5 presents the detailed figures relating to the respondents' perceptions of the use of new technologies.

Statement / agreement <i>New technologies...</i>	strongly agree	partially agree	agree	partially disagree	partially disagree	strongly disagree
motivate students.	94 (72%)	20 (15%)	15 (12%)	1 (1%)	0	0
help in the learning process.	74 (57%)	31 (24%)	23 (18%)	2 (2%)	0	0
help to develop linguistic skills.	76 (58%)	32 (25%)	21 (16%)	1 (1%)	0	0
support a multiliteracies approach.	82 (63%)	24 (18%)	22 (17%)	2 (2%)	0	0
encourage critical thinking.	46 (35%)	42 (32%)	33 (25%)	7 (5%)	1 (1%)	1 (1%)
provide new ways of teaching.	92 (71%)	18 (14%)	18 (14%)	2 (2%)	0	0
help teacher's work.	83 (64%)	21 (16%)	20 (15%)	5 (4%)	1 (1%)	0
demand extra work and time from teachers.	47 (36%)	37 (28%)	26 (20%)	9 (7%)	9 (7%)	2 (2%)
are not so necessary in English lessons.	2 (2%)	3 (2%)	3 (2%)	15 (12%)	31 (24%)	76 (58%)

Table 5.5. New technologies use and teachers' perception (Q13)

As expected, a great majority of the respondents strongly agree that new technologies not only motivate students (72%), but that they also provide new ways of teaching (71%). These figures on motivation are in line with the data provided in the CALL report (Scott & Beadle, 2014), in which motivation is mentioned as a strong benefit for using technology in the classroom.

Although a good number of teachers (64%) feel that new technologies help their work, a relevant percentage (56%) believe that such tools demand extra time and work. These figures may indicate that if, on the one hand, new technologies can be demanding; on the other hand, teachers tend to believe that integrating technology into their lessons compensates for the effort. This idea seems to become more evident when the majority of teachers also strongly agree that new technologies help students improve their linguistic skills (58%) and that digital resources help the learning process (57%).

Additionally, 63% of the teachers believe that new technologies support a multiliteracies approach. This result is in accordance with what has been said in other studies on multimodality, multiliteracies, and technology (e.g. Cope & Kalantiz, 2000, 2008, 2009;

Kress, 2003, 2005, 2010, 2011; Kress, & Jewitt, 2003, Jewitt , 2006, 2013), which emphasize the multimodal aspects of digital texts and how they need to be addressed in the classroom, so to develop different literacies among students. However, concerning critical thinking, 35% of the respondents strongly agree that digital technologies may have a positive impact on the development of this type of literacy.

Aiming to consolidate all the statements presented, the vast majority of this group of teachers (94%) indicates that new technologies are indeed necessary in EFL classrooms, in comparison to a small percentage (6%), which believes technology is not so indispensable.

In summary, two important aspects can be taken from the data gathered by Q13. In addition to increasing students' motivation, these teachers believe that technology may help their pedagogical work and help improve students' language skills. Furthermore, although it requires extra work and time, the benefits of integrating technology into the EFL classroom seem to compensate for the effort.

Intending to further verify teachers' beliefs about the development of learners' linguistic skills through the use of new technologies, in Q14 teachers were asked to order the following skills: reading, listening, writing, speaking, and critical thinking and cultural awareness – where the most developed skill should be listed first, and the least developed skill last.

Similar to Q11, most of these teachers chose the order in which these statements were presented, and as an attempt to confirm whether that was their choice rather than a technical problem, it was sent again (along with Q11) to those who had included their email address in the form. The answers submitted in this second phase confirm the results previously gathered from the original survey. Therefore, based on the results collected on both occasions, the majority of the respondents indicate listening as the skill they believe to be the most developed when using new technologies, followed by speaking. These figures support the results from Q11, based on which the majority of this group of teachers uses technology for both the interpersonal and interpretative modes. The figures in Q14 are also in line with the results from Q12, based on the fact that this group of teachers indicated YouTube as the most popular tool to use in the classroom. The indication of listening, as the most developed skill, may also support the idea that the YouTube videos are used not only for listening activities, which is a form of interpretative communication, but also, based on this listening, students can more easily engage in conversations.

Furthermore, and also in accordance with the results from Q11, writing (a type of presentational communication) is the skill that teachers believe to be the least improved when

using new technologies. This result may suggest that digital writing tools are not as popular among this group of teachers, or that they do not see how such resources can be used effectively to develop writing skills. This fact is particularly interesting, especially because, although most communication in a virtual environment is carried out in written form, it does not seem to be further explored in these particular educational settings.

Although it is clear that the Internet has brought about a new form of written communication, which in general is connected to poor grammar, a high degree of informality, and misspellings, it has also been recognized that digital tools can help improve students' writing skills, especially in foreign language learning (e.g. Alwi, et al., 2012; Kongrith & Maddux, 2005).

As for Q15, its aim is to verify teachers' views regarding other specific elements related to language learning (see Table 5.6). In this sense, five statements were provided and the respondents were asked to check those that best reflect their opinion. The purpose of each statement is to specifically verify the relationship between technology and vocabulary expansion, learning and consolidation of grammar, interdisciplinarity, character education, and cultural aspects. The answers provided indicate that 40% of the respondents believe that technology may have a positive impact on all of the areas mentioned. Vocabulary expansion and cultural aspects are the areas that the majority of the teachers (65% and 64%, respectively) believe to be better developed with the use of new technologies. Interdisciplinarity is indicated by 48% of the teachers as being positively impacted by digital tools, and only 32% of the respondents believe that grammar is better learned through technology.

The area which respondents believe is less improved by technology is character education. This fact may suggest that an effective development of digital literacy could possibly also help foster some aspects of character education in the EFL classroom, as issues related to Internet etiquette (also named 'netiquette'), online safety, and copyright are related to character education, as well.

New technologies and teachers' opinions	
Statements	No. Responses (%)
New technologies can help vocabulary expansion.	85 (65%)
Cultural aspects are better explained and shown using new technologies.	83 (64%)
It is easier to address interdisciplinarity through technology.	63 (48%)
Grammar is better taught/learned and consolidated through technology resources.	41 (32%)
New technologies in English class can help character education.	38 (29%)
All of them.	52 (40%)
None of them.	0

Table 5.6. New technologies and teachers' opinions (Q15)

To conclude the survey, Q16 addresses issues related to digital skills that are partially associated with the development of a multiliteracies approach in the classroom. In this context, respondents were asked to indicate how often they focus on the following aspects with their students: Internet etiquette; Internet safety; cultural and ideological issues; and characteristics of different digital texts.

According to the results, Internet safety issues seem to be the most important item for this group of teachers; 45% of them indicate that they always explore safety aspects with their students. It is worth mentioning that the issue of safety is the only aspect on the list that almost half of the teachers indicate they always explore.

Unsurprisingly, cultural and ideological items are also a relevant element; they are indicated as usually explored by 51% of participants, while 32% indicate Internet etiquette as usually explored, and 35% indicate that characteristics of digital texts are sometimes explored. However, exploring the characteristics of different digital texts seem to be the item least explored, with only 16% of teachers pointing out that they always explore such features and 33% as usually doing so. On the other hand, 35% indicate that they sometimes explore the characteristics of digital texts, and 12% rarely do so. These figures indicate that further research is necessary on the genre²² of digital texts in the EFL classroom, so to further verify how teachers could enhance this aspect, which is so relevant for developing multiple and digital literacies.

In summary, the results gathered from this last part of the questionnaire indicate that these teachers tend to use technology mostly to develop students' conversational skills, and that digital resources seem to have a positive impact on improving both listening and speaking

²² Text genre studies involve many theories and are reasonably complex. Therefore, it is not my intention to further explore this aspect here. However, in general terms, text genre theories explore the characteristics (format, structure, and linguistic) of different texts for pedagogical purposes. For comprehensive information on genre studies see, for example, Bawarshi & Reiff (2010).

skills, addressing cultural aspects, and developing a multiliteracies approach. However, writing seems to be the skill that this group of teachers believes is the least improved by new technologies. As for the relationship between technology and their professional practice, teachers believe that although it helps their work, by providing other ways of thinking, technology is at the same time demanding.

5.4. Final comments and conclusions

These data demonstrate that digital skills have generally been explored by most of the teachers in this group. However, it seems that in order to gather a more comprehensive and detailed understanding of how these items are actually explored in the classroom, further research would be necessary. This could involve classroom observation, and teacher and student interviews, for example.

As previously mentioned, the major aim of this questionnaire was to try to provide an overview of technology use and the impression teachers have of digital tools and their application in the EFL classroom.

Although this is a descriptive study, and the responses are not representative of the total teacher population in question, it was possible to collect some interesting and relevant information about the use of technology in EFL classrooms. First of all, as expected, the great majority of the teachers who responded to the survey do, in fact, use technology in their lessons.

In general terms, it is possible to say that the majority of them tend to use a great variety of resources and materials – both digital and print-based – in their lessons (see Q6 and Q7 results). However, one item that does not seem to be used with any frequency is video games. Even though their use is supported by several studies (Dourda et al., 2013; Ya-Hui, Yi-Chun & Huei-Tse, 2013), and is also discussed and encouraged in the report on CALL (Scott & Beadle, 2014), these teachers not usually explore digital games in class.

Nevertheless, the variety of materials employed during lessons certainly supports a multimodal approach to texts, which may help promote the development of multiple literacies. In this respect, the teachers' responses indicate that they usually explore different semiotic modes in texts (see Q8 results). The multimodal approach and the adoption of a multiliteracies pedagogy are in accordance with different documents and frameworks discussed in Chapter 3. The English syllabus for secondary education in Portugal (Ministry of

Education, 2003), for example, states that media education should be encouraged, and this can be better achieved by exploring different texts from a multimodal perspective.

As has been discussed herein, a multimodal approach is crucial for the development of multiple literacies, especially concerning critical and digital literacies. In this sense, it is not surprising that the adoption of the concept of a multiliteracies approach is listed as an action to be taken, so as to meet the INCoDe.2030 objectives of supporting and encouraging the development of digital competences at all levels of education (INCoDe.2030, p. 11), as discussed in Chapter 3.

The development of critical thinking is also essential and closely related to the promotion of multiple and digital literacies, as it is emphasized in almost all the documents discussed in the same chapter. These documents are, for instance: *Improving the effectiveness of language learning: CLIL and computer assisted language learning* (Scott & Beadle, 2014), issued by the EC; INCoDe.2030 issued by the Portuguese government (2017); and, the English syllabus for secondary education (Ministry of Education, 2001).

In this respect, the majority of the teachers who answered the survey acknowledge the importance of exploring texts critically with their students; however, from the answers provided, three obstacles could be detected (see Q9 results). The main difficulty of the majority of these teachers is related to time constraints, followed by students' confidence in expressing their views in English. The third issue, pointed out to different extents by 20% of the teachers, is the lack of confidence they face in dealing with certain types of texts or topics with their students. These results indicate that it may be necessary to offer teachers resources and, more importantly, training in how to better integrate critical thinking and language learning in their classrooms.

Although the great majority of teachers in the survey believe technology can help in the learning process and to develop linguistic skills as well (see Q13), it is relevant to mention that among the communicative objectives provided (see Q11), presentational communication is the least developed objective teachers have in mind when using technology. This mode of communication, as described by the ACTFL Standards (1996), focuses mostly on writing and speaking skills (as a one-way communication). Since teachers pointed out that speaking is the second skill they believe is best developed when using digital tools, and writing is the least developed (see Q14), it may be assumed that teachers may find it difficult to integrate technology to develop this particular skill. This assumption is also based on other studies (Alwi et al., 2012; Kongrith & Maddux, 2005) that demonstrate digital tools can improve students' writing skills, especially in foreign language learning. Therefore, these results seem

to support the idea that additional training may be necessary on how to develop this particular skill.

On the other hand, interpersonal communication (which focuses mostly on speaking) is indicated as the objective teachers usually focus on when using technology. Bearing in mind the results from Q14 (speaking as the second most developed skill), and the choice of YouTube as the most used digital tool, it is possible to assume that videos are used firstly for interpretation, and secondly to promote discussion among students. Another way to stimulate interaction by focusing on speaking and informal writing would be the use of chat apps, such as Skype and WhatsApp, for example. The use of these types of apps/websites for language learning is supported by some studies (Golonka et al., 2014; Skehan, 2003) and is evidenced in the CALL report (Scott & Beadle, 2014).

Another key aspect that teachers indicated about the use of technology in the classroom is motivation. In accordance with previous studies (Casado & García, 2000; Golonka et al., 2014), and as pointed out in the CALL report (Scott & Beadle, 2014), there is evidence that technology improves learners' motivation, by making them become more engaged in the learning process.

Despite these teachers believing new technologies demand extra time and work from them, when comparing with the associated advantages, these issues do not seem to be a huge obstacle. However, it may be an indicative that there is a need to develop solutions and digital tools for learning, which would facilitate some aspects for teachers.

Regarding the emphasis on digital literacies, it is important to mention that, from the items provided (Q16), the characteristics of digital texts seem to be the least explored by this group of teachers. As previously mentioned, this may be indicative of a need to further research the existing genres of digital texts and, subsequently also develop ways to train teachers on this matter.

In conclusion, the information obtained from this survey indicates that technology is indeed a part of contemporary society and an indispensable resource for communication. Considering these facts, it is impossible to ignore its function in educational settings in general, and in language and EFL classrooms, in particular. In this regard, it seems of crucial importance to provide teachers with suitable training and materials, so that they can benefit from digital resources and be able to better integrate them into their pedagogical practice.

Therefore, concerning research question number 1 – whether new technologies, and more specifically the Web 2.0, have been used in the English classrooms of third cycle and

secondary education in Portugal – it is possible to answer that the teachers who participated in this survey do, in fact, tend to use the Web 2.0 and new technologies in their lessons.

Although research question number 2 – whether new technologies have been used in a way which promotes a multimodal and multiliteracies approach; and whether these teachers consider these technologies to be helpful in improving language skills and meeting learning objectives – can be positively answered in a very general way, it is true that further research on the topic is necessary in order to establish a more detailed picture on the use of these technologies in EFL classrooms.

In this sense, it is expected that the data gathered from this survey may be further explored, so as to expand the research on the topic, for example, through: comparative studies with other countries from inside or outside the EU; or studies concerning the use of digital tools in the teaching-learning process of other foreign languages. Moreover, it may also be viewed as a stepping-stone for future research on technology use and how a multiple literacies approach can be applied in the EFL classroom.

Chapter summary

The aim of this chapter was to present and discuss the results from a questionnaire sent to ELF teachers of the third cycle and secondary education in Portugal, so as to verify their opinions on the use of technology in the EFL classroom.

The chapter was organized into four sections; the first three sections were dedicated to the discussion of the results of each part of the survey, i.e., demographic data, materials and resources used, and the use of new technologies. In the fourth and last section, some final comments and a conclusion are provided, based on the results of previous studies, and on the documents that establish the guidelines and goals for digital literacies in the EU and in Portugal, as discussed in the previous chapters.

Bearing this in mind, it can be assumed that, among this group of teachers, technology tends to be part of their professional practice. However, it seems that further training and the development of suitable materials is required to facilitate and better integrate new technologies in the classroom.

Conclusion

This study aimed to investigate if and in which ways new technologies, and especially the Web 2.0, are explored in English classrooms of the third cycle (Years 7 to 9) of basic education and secondary education (Years 10 to 12) in Portugal; therefore, the study tried to answer the following questions:

1. Have new technologies, and more specifically the Web 2.0, been used in English classrooms of the third cycle and secondary education in Portugal?
2. If so, how have these technologies been used?
 - a. Have they been used in a way that promotes a multimodal and multiliteracies approach?
 - b. Have teachers considered them helpful in improving language skills and meeting the learning objectives?

Furthermore, it is possible to establish the following objectives for this research:

1. To analyze how technology, and more specifically the Web 2.0, has been used in English classrooms.
2. To analyze if and how technological tools have been used to develop a multimodal and multiliteracies approach.
3. To verify if technology is considered useful to develop language skills and how.

In order to meet these objectives and answer the research questions put forth, apart from the theoretical discussion provided, the methodology applied in this study involved the collection of data through an online questionnaire, which targeted EFL teachers in the educational levels mentioned. So as to achieve the proposed aims, this study was organized into five chapters, which are briefly described and commented on below.

Chapter 1 provided an overview of the key concepts and theories related to learning practices in contemporary societies, on which the present study relies on, namely: multimodality; multiliteracies; digital literacies; and the role of the English language and English language teaching in the fast-paced technological society. In Chapter 2, a definition of the Web 2.0 was presented as well as a of the digital tools that have been useful in education. Additionally, the implications of the Web 2.0 for foreign language learning were

also briefly discussed. As for Chapter 3, its main purpose was to provide an overview of the documents and initiatives concerning digital competences, which are under discussion in the EU and in Portugal, as well as to present some studies which these initiatives rely on.

After establishing the theoretical background and discussing the documents concerning the integration of technology in education and the development of digital literacies, Chapter 4 focused on the details of the methodology applied in this research. In this sense, the reasons for the study as well as the research questions and their objectives were provided, along with a description of the research context and the rationale for choosing the two educational levels in question. The survey on the use of technology in EFL classrooms was also presented in Chapter 4, and each question was closely considered one by one.

Finally, the aim of Chapter 5 was to present and discuss the results from the survey sent to the EFL teachers. Based on the data gathered, it can be assumed that although technology seems to be part of the professional practice of most of the teachers who completed the questionnaire, it is not exactly clear whether digital tools are used to actually promote new ways of teaching, or if they are simply used improve or adapt more traditional teaching practices.

In this sense, concerning research question number 1, it is possible to state that the teachers who participated in the survey tend to use the Web 2.0 and new technologies in their lessons. Although research question number 2 can be generally answered in a positive way, it is can be assumed that further research on the topic is necessary, in order to establish a more detailed picture on the use of these technologies in EFL classrooms.

Therefore, up to a certain extent, it is possible to say that the research objectives have been met. It is also evident that this group of teachers tends to use at least some Web 2.0 tools and that most of them believe these new technologies are useful for developing language skills. However, even though most of these teachers stated that they usually adopt a multimodal and multiliteracies approach to texts, it is not clear how they do that.

In this respect, and like in any other research, this study presents some limitations. As previously stated, one of these limitations, which is connected to the use of a questionnaire, is the inability to confirm and clarify teachers' answers. Besides, as a descriptive study, and considering the limited number of answers, the conclusions drawn thereof can only be applied to this particularly group of teachers, which means that a similar questionnaire administered to a different group of English teachers in the same educational levels might lead to different conclusions.

It could also be argued that the length of the survey would consequently lead to a limited analysis; however, the simplicity and the limited number of questions were intentional considering the purpose of this study. The intention of this study was not to propose an extensive and complex survey, which could make teachers feel discouraged to complete it, due to their lack of time or complexity of it.

However, given its own nature, time available and the lack of space for providing a deeper discussion on the topic, the method of data collection chosen seems to be the most suitable alternative to try to establish, in a short period, an overview of the use of Web 2.0 tools, and teachers' impressions on digital resources and their application in the EFL classroom.

Summing up, this dissertation attempted to provide a general theoretical background on the use of technology in education, more particularly, in language teaching and in EFL. In addition, it also provided an empirical analysis, which is expected to be useful for further research on the topic

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Appendix

Questionnaire

Title of the questionnaire: Multiliteracies and the Web 2.0 in EFL classroom

Dear English teacher of the third cycle and secondary education,

My name is Silene Cardoso and I am working on a dissertation entitled Multiliteracies and the Web 2.0 in the EFL Classroom for the Master's program in English and American Studies at the School of Arts and Humanities (Faculdade de Letras), University of Lisbon.

In order to complete my investigation, I would appreciate it if you could answer this 10-minute questionnaire on multiliteracies and the use of technology in your English classes.

This is an anonymous questionnaire; therefore, you will not be asked any personal information and there are no "right" or "wrong" answers. The questionnaire will be accessible until March 31st, 2017.

Thank you for your time and willingness to complete this survey.

Kind regards,

Silene Cardoso

1 What is your age group?

- < 30
- 31-40
- 41-50
- 51-60
- 60

2 Where do you teach?

(Select all that apply)

- Entre o Douro e o Minho
- Trás os Montes e Alto Douro
- Beira litoral
- Beira interior
- Estremadura e Ribatejo

- Lisboa e Setúbal
- Alentejo
- Algarve
- Islands

3 Which teacher training did you complete to become an English teacher?

(Select all that apply)

- Profissionalização em serviço
- Ramo de formação educacional
- Mestrado em Ensino

4 Which level do you teach?

- Third cycle
- Secondary level
- Both

5 What do you have available in your school?

(Select all that apply)

- Internet
 - Internet in the classroom
 - Interactive board
 - Projector
 - Computer room
 - Computer in the classroom
 - Tablets
 - Other (Please Specify)
-

6 Which item(s) do you use in your lessons?

(Select all that apply)

- Printed textbooks and additional photocopied texts
 - Digital textbooks and their resources (DVDs, online activities or tests, etc.)
 - Audio materials (textbooks CDs, podcasts, songs, etc.)
 - Videos (films, clips, etc.)
 - Traditional games and role-play
 - Electronic games
 - Projected presentations (Power Point, Prezi, Word, etc.)
 - Internet for different purposes (dictionaries, encyclopedias, newspapers, magazines etc.)
 - Other (Please Specify)
-

7* How often do you use these items?

	always	usually	sometimes	rarely	never
Printed textbooks and additional photocopied texts	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Digital textbooks and their resources	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Audio materials	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Videos	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Traditional games and role play	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Electronic games	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Projected presentations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Internet for different purposes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other material specified in question 6	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

8 In addition to verbal language, which of these aspects do you usually explore when working with printed or electronic texts and materials with your students?

(Select all that apply)

- Layout and fonts
 - Colors
 - Sounds
 - Gestures (in speech, for example)
 - Images (static or moving, like in films, video clips)
 - None / do not know
 - Other (Please Specify)
-

9 To what extent do you agree (or disagree) with the following statements?

	strongly agree	partially agree	agree	partially disagree	disagree	strongly disagree
Not only is it important to provide a variety of texts with different topics, but also to critically discuss them.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Not only should the students express their views in English, they should also take a position on the subject under discussion.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My students do not feel confident to express their opinions in English.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I don't feel comfortable and/or confident to discuss certain types of texts or topics.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Although important, it is not always possible to approach reflexive questions due to time constraints.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Approaching reflexive questions on different topics is not very important in English lessons.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

10 Do you use any technology resource in your lessons?

- Yes.
- No.

11 Why do you use technology to teach English?

Order 1 to 3 (1 the most important objective and 3 the least important objective).

- To make students engage in conversations, exchange opinions and express feelings.
- To make students understand and interpret written and spoken language on a variety of topics.
- To make students present information, concepts and ideas on a variety of topics.

12 Do you use or have already used any of these technology resources with your students?

(Select the item(s) you have already used at least once)

- Skype
 - Google Hangouts
 - Facebook
 - Playposit
 - Edmodo
 - Wikispaces
 - Google docs
 - Google drive
 - Prezi
 - Twitter
 - Blogs
 - E-mails
 - Text messages
 - WhatsApp
 - Youtube
 - Other (Please Specify)
-

13 Considering your experience with technology resources in the classroom, to what extent do you agree (or disagree) with these statements?

<i>New technologies...</i>	strongly agree	partially agree	agree	partially disagree	disagree	strongly disagree
motivate students.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
help in the learning process.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
help to develop linguistic skills.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
support a multiliteracies approach.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
encourage critical thinking.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
provide new ways of teaching.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
help teacher's work.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
demand extra work and time from teachers.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
are not so necessary in English lessons.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

14 Which skills do you believe can be better developed with the use of technology?
Order them 1 to 5 (1 the skill that can be best developed and 5 the skill that is least developed with the use of technology).

- reading
- listening
- writing
- speaking
- critical thinking and cultural awareness

15 Which statements best reflect your opinion? (*Select all that apply.*)

- New technologies can help vocabulary expansion.
- Grammar is better taught/learned and consolidated through technology resources.
- It is easier to address interdisciplinarity through technology.
- New technologies in English class can help character education.
- Cultural aspects are better explained and shown using new technologies.
- All of them.
- None of them.

16* When using new technologies with your students how often do you focus on the following items?

	always	usually	sometimes	rarely	never
Internet etiquette	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Internet safety	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
cultural and ideological issues	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
characteristics of different digital texts	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>