Chapter 9
Online Language Learning: Understanding and Supporting the Contemporary Digital Multilingual Learner

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ABSTRACT

This chapter addresses two forces in contemporary societies. The first is that societies today are characterized by cultural and linguistic diversity and increasing human mobility. In this complex setting, language learning has acquired more significance, with the need to communicate worldwide. Secondly, our society is experiencing dramatic technological advancements, one of which pertains to online learning. In this era of ubiquitous learning, where the use of learning management systems, mobile applications, social networks, and other digital technologies can underpin learning, it is necessary to re-address language learning. This overview will categorize the types of online language learning tools and practices that are emerging and prevalent and it will analyze their instructional approaches in the use of the technology. It will also focus on the digital learners that access them having as an ultimate goal to understand the characteristics and needs of the contemporary global, multilingual, and digital learners and how these can be addressed in the learning process.

INTRODUCTION

Contemporary society is characterized by cultural and linguistic diversity and increasing human mobility. People not only travel more easily to other countries, but they work, study, live and relocate to other countries. They consider all places on the planet as an opportunity to advance their lives and/or as adventure.

For example, Europe has a tradition in multilingualism, given the fact that speaking many languages and interacting with various cultures are integral to its foundations. In the European Union we can find 24 official languages and more than 60 indigenous regional or minority languages, which are spoken by around 40 million people (Kużelewska, 2014). In the meantime, another example that supports the importance of multiculturalism can be found in the United States of America (USA). According to US

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Census Bureau (2015), 44.2% of the millennials, people born between 1982 and 2000, are part of a minority race or ethnic group (people that are not non-Hispanic, single-race white). Moreover, the languages other than English (LOTE) spoken at home in the US had increased by 148% between 1980 and 2009 (US Census Bureau, 2011). On the other side of the Pacific Ocean, China is also a case of a country that plays an important role in the field of language learning. According to Wang (2015), almost 400 million Chinese speak English at various proficiency levels. In Mainland China, the government promotes foreign language learning, as part of a broader policy to construct international relations with other countries in political, economic and cultural level (Bolton & Graddol 2012). In 2012, in China there was the largest number of Japanese language learners comparing to the rest of the world and the motivation of Chinese learners of Japanese continues to increase, having as a personal goal the achievement of better cross-cultural understanding (Lv, Gao and Teo, 2017; Gao & Lv, 2018; Teo et al., 2019). Moreover, a lot of students from Mainland China realize their studies in countries such as France, Germany and Spain, thus before moving to these countries, the Chinese students prepare themselves linguistically in their home country by taking lessons of foreign languages (Wang & Xu, 2015). As a consequence, it is obvious that China is another example of a country that reinforces the importance of learning foreign languages, either that language is English or a LOTE (Cheng, 2012; Gao & Zheng, 2019). In this complex setting, with the need to communicate worldwide and across countries, as presented in the above examples, language learning has acquired more significance.

Meanwhile, learners nowadays live in fast paced, constantly changing times and they have developed different needs comparing to the past. Therefore, our society requires lifelong learning and development of new skills as essential personal features that can underpin success (Strimel et al., 2014). In this context, formal learning in a traditional educational institution is not considered the most effective option for learning new ways of engaging with the world of work and sociality. Thus, informal learning and the integration of a variety of approaches to learning has gained a lot of interest and significance (Zapata & Lacorte, 2018).

Learning is not restricted to a specific place, time or age (Kalantzis & Cope, 2012; Schugurensky, 2000). It happens in our everyday life, at home, at work, while shopping in a market place or visiting a museum, with our family and friends, while using social media or travelling, when meeting new people or living in a foreign country (Melnic & Botez, 2014; Strimel et al., 2014; Raikou & Karalis, 2010) and most of these times we do not even realize that we are actively learning (Kalantzis & Cope, 2012). This kind of learning engages with the world around us, using authentic, every day experiences as its basis. (Kalantzis & Cope, 2012).

Our society is also characterized by huge and innovative technological advancements, called the Digital Age. These technological advancements provide us with an abundance of information and its easy access, through the Internet and mobile devices (Strimel et al., 2014). In this era, with the greater potential for ubiquitous learning (learning anywhere, anytime), the use of web-based learning management systems, mobile applications and social networks can underpin learning.

As a result of the increasing interest in the domain of digital and online learning, as well as the significance of language learning, an area that is acquiring more and more attention is also online language learning (OLL) (Blake, 2011). There have been some significant steps in the development of innovative platforms and applications for online language learning. However, there is not a lot of research yet on the effectiveness and the learning outcomes of online language learning tools and activities (Tarone, 2015).

Bringing these issues together, this chapter re-addresses the issue of language learning from a technological/ mobile/ online perspective considering in parallel to this the characteristics of the emerging

'digital learners' and having as a ultimate goal to understand the needs of the contemporary global, multilingual and digital learners and how these can be addressed. This overview outlines the emerging and prevalent approaches in online tools that are used for language learning and analyzes its practices. The ultimate objective is to distinguish the qualities/features of OLL offerings with regard to their potential for contemporary digital student's learning.

CHARACTERISTICS OF THE DIGITAL LEARNER

Education change is in action to address the needs of students who are constantly in interactive exposure to technological tools and digital devices in their everyday life (Prensky, 2001; Maton, 2010). These learners have been raised in tech-immersed environments and their needs are required to be approached diversely to achieve high quality learning results (Prensky, 2001; Maton, 2010).

In the time that this type of learners has arisen, the main educational problem that has been encountered was the old, digitally illiterate instructors who were entitled to convey and expand the knowledge of the tech-savvy students (Prensky, 2001). However, as the Digital Era progressed, age was not considered the criterion to define tech experts and non-experts, due to the fact that many older people gained experience with digital technologies (Maton, 2010). This experience though was acquired with much more effort by older people than by their younger counterparts and thus, the digital gap remains between the two groups, but having as benchmark the type of advancement concerning technological literacy (Maton, 2010).

This situation suggests the necessity to understand the emerging 'digital learners' in order to better adjust the educational practices to their needs. As mentioned before, modern digital learners have constant access to their smartphones and laptops or desktop computers (Oliver & Goerke, 2007; Kennedy et al, 2009). However, according to Margaryan, Littlejohn & Vojt (2011), the type of use that they are doing is use is mostly quantitative and not qualitative and thus, in learning they are influenced by the instructional techniques that their teachers utilize. Moreover, the type of uses that they carry out with technologies, as well as the type of interactions that they achieve through them constitute the digital learners very diverse and evolving (Maton, 2010).

The International Society for Technology in Education (ISTE, 2016) has introduced a series of main characteristics that digital learners present, and which should be taken into consideration when designing tech tools for the contemporary 'digital learners'. These characteristics are described briefly below (ISTE, 2016):

The emerging 'digital learners' are **empowered,** referring to their dynamic approach in the learning process, since they appear to be motivated to utilize technology to set, advance and achieve their learning goals. In the technologically networked world that these learners live in, where access to the web is constant and ubiquitous, they are considered conscientious **digital citizens**, who are aware of their rights and obligations when using technologies. They want to preserve and transform accordingly the safe, legal and ethical manners they have acquired in the social world in order to correspond to the demands of the Digital Age. Based on the high exposure to information, the digital learners critically select and combine the appropriate tech tools and receiving information in order to produce new knowledge for themselves and for others (**knowledge constructors**), which makes their learning meaningful. This new knowledge corresponds to real-life issues and problems that need to be solved and thus, digital learners try to encounter them with state-of-the-art and creative ways, which constitutes them as **innovative designers**. Moreover, they are characterized as **computational thinkers**, as they try to develop

automated and algorithmic problem-solving techniques that will lead them to creation and testing of technologically complemented solutions to troubling issues. Furthermore, digital learners are considered **creative communicators**, due to the fact that they use variety of digital and multimodal resources and tools to express their ideas in various ways. They usually do not want to remain to traditional means of content presentation, and they are trying to find the optimal, interactive and engaging approach to deliver content to their target audience. Having the possibility to connect quickly and efficiently with people around the world, 'digital learners' have evolved to be **global collaborators**, addressing local and worldwide issues synergistically, using digital tools not only to connect with each other, but also to address the various issues.

The above description of the characteristics of the digital learners is essential in this chapter, since we are trying to understand the contemporary digital multilingual learners, focusing on online language learning, and the ways their needs are addressed or not by the prevalent OLL tools and techniques.

REASONS AND MOTIVATIONS FOR LANGUAGE LEARNING

In the context of local diversity and a globalized society, where the interaction among people from different backgrounds and countries is constant and direct, learning and speaking foreign languages can be an asset for many domains of life.

The reasons and motivations that a person would like to learn a new language, other than his first language and especially after school age, depends significantly on the contexts that these languages will be used (Kalantzis et al., 2016). People need to learn languages in order to communicate in their work environment, to participate as citizens in public spaces, as well as to engage as members of various communities (Kalantzis et al., 2016).

Gardner & Lambert (1959, 1972) suggested that there are two main orientations to people's motivation to learn a second language, integrativeness and the instrumentality. Integrativeness refers to the desire of learning a second language in order to communicate with the group of people that speaks that language, to learn more information about it or even to be identified as a member of this community (Gardner & Lambert, 1959; Lightbown & Spada, 2013; Brown, 2014; Cook, 2016). For example, people who create bilingual/multilingual families, referring to the situation of two married people with different first languages, they usually want to learn the language of their husband or wife respectively, in order to understand better their culture, their way of thinking and acting, and even become part of it. On the other hand, instrumentality concerns the practical use of learning a second language, such as to pass an exam, to get a better job, to live in another country, etc. (Gardner & Lambert, 1959; Lightbown & Spada, 2013; Brown, 2014; Cook, 2016).

Later, researchers added the following three categories as reasons for language learning: travel, friendship and knowledge (Noels et al., 2003; Dornyei, 2005). Travel refers to the reason that people learn a language in order to visit another country for a short or long period. Friendship addresses the motivation of learning a language because of having friends who speak another language and in order to communicate better with them and more in-depth. Knowledge is the reason that people learn a language because they are interested in the language itself or because they want to explore something new or just because they are able to learn languages easily, in general and they get pleased by that.

As Lamb (2004) and Brown (2014) state, the distinction between these orientations should not be considered as unidirectional, for the reason that someone's motivation could be easily integrative and

instrumental at the same time, or that they are learning a language for reasons of travel and friendship together. A common example of this case are international students who study English in the United States both to succeed in their studies, but also to be integrated in the American culture (Brown, 2014).

Most recently, due to the evolution of our society in a globalized way, where English was viewed as a global language, unrelated to a specific English-speaking culture (Lamb, 2004; Ushioda & Dornyei, 2009), people wanted to learn English (most often) in order to be defined as global bilingual citizens who were ready to encounter the challenges of this world (Lamb, 2004; Ushioda & Dornyei, 2009). Therefore, as Dornyei argued, (Dornyei & Csizer, 2002; Dornyei, 2005; Dornyei & Al-Hoorie, 2017) it is more reasonable to describe integrativeness as the 'Ideal L2 self', referring to the self-concept of the future person that someone dreams and desires to become by learning a second/foreign language, without any connection to a particular L2 (second language) community.

However, lately even the notion of the 'Ideal L2 self' appears be controversial as the dynamic of languages in the globalized and diverse society changes. As Dornyei & Al-Hoorie (2017) mention, the 'Ideal L2 Self' was associated to a monolingual ideal self, who would speak Global English as a second language. Nonetheless, this is arguable nowadays, since people do not learn only English, but in the multilingual context of the contemporary world, languages other than English (LOTE) are being targeted as well (Dornyei & Al-Hoorie, 2017). These LOTEs are usually connected to specific cultures and communities (Dornyei & Al-Hoorie, 2017).

As a consequence of these arguments, a new term has been introduced to describe the orientation of learner's motivation towards SLL, the Ideal Multilingual Self (Henry, 2017; Ushioda, 2017). This concept refers to a person's ambition of becoming multilingual, as a result of his/her general interest towards foreign languages in a globalized, multilingual and multicultural society (Henry, 2017). This notion impacts motivation, as people imagine themselves having a multilingual identity, by developing core self-values, such as openness, empathy and discovery and thus, building their inner self-concept through learning (Henry, 2017).

Taking into account the aforementioned discussion and as Brown (2014) mentions, instructors and pedagogues should consider that motivation in SLA is multidimensional. It depends profoundly on the context and it is dynamic (Lightbown & Spada, 2013), which helps us perceive the diversity of second/ foreign language learners, their multilingual ideal self and the fact that SL learning should be differentiated, in order to fulfill the needs of individual learners (Brown, 2014). As a result, this also helps us understand what features people seek in online and digitally enhanced language courses, tools and/ or applications in order to address their inner powers that guide them in this direction of SLA.

DEFINITION OF ONLINE LANGUAGE LEARNING (OLL)

Kraemer (2008) first defined distant learning as learning that happens when learners and instructors are at a distance, physical and/ or referring to time. Distance learning has evolved over the years and now encompasses, for example, online learning, e-learning, open learning, blended or hybrid learning. (Blake, 2009). Oblinger & Hawkins (2005), Dublin (2003), as well as Holmes and Gardner (2006) contend that there isn't an established way of defining e-learning, since each definition manifest the perspectives of the various academics of the domain. As Arkorful & Abaidoo (2015) claim, e-learning concerns the facilitation of learning through the utilization of digital technologies. Therefore, the term can include distant, fully or hybrid online courses that are realized through the use of the Internet (Gotschall, 2000;

Maltz et al, 2005) or learning through the use of information and communication technologies as a complement to traditional, online or hybrid learning (OECD, 2005). Despite the type of definition that each one accepts, the important element of e-learning is that it enhanced the interaction of students with their teachers and peers and it enabled the differentiation of learning, through which students can address their individualized challenges (Tao et al, 2006; Arkorful & Abaidoo, 2015).

In this overview, we will use the term 'online learning' for all digital manifestations of language offerings, as we will focus on the utilization of the web for learning and on the possibility of interaction with peers and instructors, despite the distance.

From the year of 2000 and later, the interest in online learning has risen by about 20% in postsecondary education (Blake, 2011). Online language learning has in fact expanded in both educational institutions and commercial organizations (Lin & Warschauer, 2015). The term online language learning (OLL) concerns the learning of a second or foreign language through the use of digital learning platforms, tools and applications which provide learning material, as well as the potential of interaction with peers and/or the instructor, and they function online. According to Blake (2011), online language learning refers to web-facilitated, blended/hybrid or fully virtual/online courses. These types of online language learning offerings can include synchronous and asynchronous formats and various types of technologies (Blake, 2009; 2011; Blake et al., 2008).

DIGITAL AFFORDANCES AND ONLINE LANGUAGE LEARNING

In the contemporary globalized and digital society, the ways of making meaning and communicating are variable due to multiple and different cultural, social and domain-specific situations that emerge in every moment of the modern life (Kalantzis et. al., 2016). This socially diverse setting entails varied types of interactions and meaning making (Kalantzis et. al., 2016).

In the meantime, meaning making and communication in this setting are also characterized by multimodality, due to the plethora of available media (audio, video, visual, printed, gestural, tactical, etc.) that constitutes an integral part of people's everyday life (Kalantzis et. al., 2016; Zapata & Lacorte, 2018). In this context, there is no longer a monopoly of interest of learning and teaching the traditional/standard form of the dominant language (Kalantzis et. al., 2016). Language and, in a more general sense, literacy should be defined in a different way, inside the spectrum of multilingualism and multimodality (Kalantzis et. al., 2016). The theory that describes a way to define language learning that captures this diversity, is called 'Multiliteracies pedagogy' (Kalantzis et. al., 2016). This notion refers to the fact that modern literacy does not need to be restricted only to traditional reading and writing skills, but it should be complemented and expanded by multimodal communication. It should also facilitate learner voices and be aware of their dispositions. (Kalantzis et. al., 2016).

The idea of Multiliteracies has led to the creation of a pedagogical approach that is related directly with e-learning and the way online learning platforms could function better to harness learner engagement and enhance performance in the context of the digital (Kalantzis & Cope, 2012). One of the fundamental ideas behind this move is the notion that our contemporary society requires learners to have different traits than they used to have a few decades ago. As a consequence, it suggests that the role of learners in education should change radically (Prensky, 2001; Maton, 2010; Kalantzis & Cope, 2012; Cope & Kalantzis, 2016). Kalantzis and Cope (2012; 2016) make the case that working in a digital space allows students to be reflexive knowledge producers and co-designers of learning. More specifically, this ap-

proach suggests that there are Seven Affordances of the digital that need to be harnessed to create new learning ecologies that use new media productively and appropriately in teaching and learning (Cope & Kalantzis, 2012). These digital affordances can accommodate the diversity of 'digital learners' and their complex needs in the Digital Age.

Having as objective to address the evolving characteristics and needs of the contemporary digital multilingual learner in online environments, the framework suggested by Kalantzis and Cope (2012; 2015; 2016) provides design choices that could be used in the process of creating and evaluating online language learning tools, platforms and applications.

Below the framework of the Seven Digital Affordances is presented accompanied by examples of how it could potentially be utilized into online language learning settings (Kalantzis & Cope, 2012; Kalantzis and Cope, 2015; Cope & Kalantzis, 2016):

Ubiquitous Learning refers to learning anytime, anywhere, anyhow. This affordance corresponds to the notion of informal learning, which can happen on every aspect of our life, no matter the time or the location. This affordance has become indispensable, because of the use of new digital and web-based media.

In online language learning this can be translated as utilization of a mobile or web-based application to learn/practice the language or to interact in real-time with native speakers, while being at home or when commuting. Ubiquitous learning gives language learners the possibility to access immediately and anytime multimodal language content, by listening to music, reading texts or watching a movie from real sources in a foreign language.

Recursive Feedback means formative assessment, continuous feedback and constructive to learning. Students nowadays should get feedback on their performance while they are still in process of their learning.

In an online language setting, this could mean a response from a machine in a game, an intelligent tutor, a comment from peers according to the rubric, a reply in a discussion board, a review of an e-portfolio or the immediate check of the answer in a question.

Multimodal Meaning: This affordance addresses the use of various types of media, like images, videos, audio, text, data at the same time to enhance the meaning of the topic addressed.

As far as language learning is concerned, this is very beneficial, because interaction with various media is present in learners' everyday life, through the technological advancements, and thus, multimodality is necessary to address the modern nature of meaning making (Zapata & Lacorte, 2018). In an online language setting, this can be easily implemented through the integration of the various types of communication on the learning process and by establishing learners' interaction with all these media.

Active Knowledge Making refers to the design of meanings, the idea that the learner is knowledge producer and meaning maker. This affordance points out the change in the balance of agency, having students become more active participants of the learning process.

In online language learning, this could be translated as the idea of students being involved in the selection of topics, according to their interests, in the selection of activities, for example if they want to practice more oral communication than written production, in the creation of content through interaction and collaboration with peers and native speakers, etc.

Collaborative Intelligence: This affordance refers to learners creating knowledge that can be reached for and used by themselves and other learners. In practice, this can be found in the idea of sourcing knowledge instead of memorizing it. In our everyday life, we have access to millions of sources that give us answers to our queries. Thus, instead of trying to memorize all these sources, we only have to source

them when needed. This practice leads us to the idea of knowledge collaboration and social learning. Since knowledge can be reached through a few clicks in our digital devices, we should aim in developing skills that will learn learners how to collaborate in this new setting, by creating knowledge, making it available to other learners and also using other's work, too. This whole practice seems to be the modern way of dealing with knowledge in the digital era.

In online language learning setting, this idea could be translated as creating multimodal content using the target language and providing it to peers or using other learners' content to enhance the learning process.

Metacognition refers to thinking about thinking, which improves learner performance (Bransford, Brown, and Cocking 2000).

In online language learning, metacognition means understanding the structure of the language, make connections with the first language of the learner and analyzing the foreign/second language in a deeper level. This process should help learners to better conceptualize the language and use it appropriately in various situations. In practice, these connections could be made by using annotations, tags and conceptual maps in works created in the target language, as well as by peer or native speakers' feedback provided to learners, which can lead to higher order level thinking about the language and about using the language.

Differentiated Learning: This affordance is used to address the different needs of the students and it is highly implemented in online systems, because of the adaptability and flexibility offered by them. This practice refers to the fact that every student can work in his own pace, dealing with content personalized to his level, without restrictions of space and time. Each student learns according to their interests and needs. Learners in online systems can work on different things on the same time or on the same thing but at different pace.

In an online language learning setting, this can become real by having students work at their own pace, on the topics that interest them and by combining students' work to create a bigger project. Some tools that might help instructors manage learners' performance towards this differentiated direction are dashboards, learning analytics, alternative navigation paths and adaptive learning mechanisms. These tools would let teachers find out easily in which level every student is and therefore they can better identify their needs and provide them with the appropriate material accordingly. The 'digital learner' becomes an active creator of their learning experiences and shares active responsibility for their progress and that of their peers.

TAXONOMY AND ANALYSIS OF SELECTED ONLINE LANGUAGE LEARNING PRACTICES

Computer Assisted Language Learning (CALL) is the domain that refers to every process in language learning that a computer, laptop, smartphone, tablet or console can be used to improve learning (Scott & Beadle, 2014). Part of CALL is OLL, which, according to Scott & Beadle (2014), consists of online environments where learners can communicate with foreign language speakers through email, synchronous or asynchronous texts, social media and video or audio conferencing, online virtual learning environments where teacher-learner and peer interactions are available, as well as online based games that support language learning.

To understand the way online language learning tools and platforms work in the interests of the digital learners, below (in *Tables 1, 2, 3, 4, 5*) a selection of OLL practices and applications is presented,

Table 1. Categorization and analysis of structured educational tools

Educational tools (structured tools, lesson plan format, used mostly in formal educational settings)		
Application/Practice	**Main features**	**Digital Affordances deployed**
Learning Management Systems (e.g. *Moodle, Blackboard, Canvas*, etc.)	● Mainly traditional format of courses. ● Content delivery through readings, pre-recorded videos, discussion areas, tasks and assessments. ● Often learning analytics feature: assessment of student's performance through a huge amount of data points during the learning process, through summative assessment. (Cope & Kalantzis, 2016)	- Ubiquitous learning - Multimodal meaning - Recursive feedback The fulfillment of the rest depends on the type of structure created by the instructor.
Language Massive Open Online Courses (LMOOCs), e.g. *Coursera*	● Structured material, defined learning objectives, specific timeframe (Chik & Ho, 2017). ● Instructional approach used: Flipped Classroom (Godwin-Jones, 2014) ● Interaction between learners is an essential part (Dixon & Fuchs, 2015) ● Strong teacher presence (Rubio, 2015)	- Ubiquitous learning - Multimodal meaning - Recursive feedback - Active knowledge making - Collaborative intelligence The fulfillment of the rest depends on the type of structure created by the instructor.
LinguaMeeting https://www.linguameeting.com/	● Connection of language learners with native speakers-coaches ● The coaches work close to the material used in schools they are partnered with ● The coaches give feedback to instructors for learners' performance ● Attendance tracking ● Recording of sessions	- Ubiquitous learning - Multimodal meaning - Recursive feedback - Metacognition - Differentiated Learning

categorized based on the ways they are offered and how they can be used. They are examined on their main features and if these correspond to any of the seven digital affordances, as they have been defined previously in this chapter.

Structured Learning Practices

This term refers to practices used often in formal educational settings, like in schools and universities as part of the formal curriculum, or to digital technologies that their main format follows the same structure of a formal curriculum. However, due to the needs of the modern digital society, adult learners usually turn their interest to some of these practices to learn languages as part of recreational learning, during their free time and/or as a hobby (Chik & Ho, 2017).

Unstructured Learning Practices

Unstructured learning practices refer to tools and platforms used for online language learning in informal situations. The difference with the previous category lies in the structure of the content. In this type of practices, language material is formed in such a way that is closer to real-life situations. The content is not delivered as in an official school/university course, but as the learner would experience it in a

Table 2. Categorization and analysis of structured commercial tools

Commercial tools (paid tools with intention to make a profit through offering language learning)		
Application/Practice	**Main features**	**Digital Affordances deployed**
Rosetta Stone (1992) https://www.rosettastone.com/	● Interactive structured series of courses (Kickmeier-Rust & Albert, 2013) supported by pictures and audio mostly ● Use of the target language ● Every lesson has a core activity and other secondary activities that can be chosen by users according to their preferences in vocabulary, grammar, pronunciation and reading (Kickmeier-Rust & Albert, 2013) ● Connection and interaction with native speakers-coaches and other learners ● Live feedback in pronunciation	- Ubiquitous learning - Multimodal meaning - Recursive feedback - Differentiated Learning

real-life activity. Nevertheless, a lot of them have the potential to be used in formal educational settings, depending on the way the instructor will utilize them.

Online language learning should provide opportunities for social, real and meaningful interaction, which will lead towards an active knowledge process (Van Deusen-Scholl, 2015). This feature is usually insufficient in the majority of the commercial products of online language learning (Nielson, 2011). Nevertheless, recently the rise in interest for language learning through mobile technologies has created a fruitful environment for the affordance of collaboration to thrive (Kukulska-Hulme, & Viberg, 2018).

Mobile Assisted Language Learning (MALL) is the domain that includes the various mobile devices and applications that are available to users in order to learn a new language. This kind of applications are usually unstructured, trying to resemble to social networking or game environments that are part of our everyday lives. Some of the benefits of using mobile technologies are that they reinforce flexible use, timely feedback, personalization and self-directed learning, active participation of students, peer interaction and review, as well as cultural authenticity (Kukulska-Hulme, & Viberg, 2018). Moreover, according to Kukulska-Hulme, & Viberg (2018) mobile learning enhances the combination of individualized and collaborative learning, as well as task-based, situated and communicative language learning.

Table 3. Categorization and analysis of structured free online tools

Free Online Tools (free, usually focused on, but not limited to, developing one area of language learning, e.g vocabulary, pronunciation, everyday conversations, etc.)		
Application/Practice	**Main features**	**Digital Affordances deployed**
Tool that connects language learners with native speakers		
Cultura (1997) https://cultura.mit.edu/	● Online intercultural exchange between students ● Partnership of two language classes (two teachers, two group of students) from different cultures	- Ubiquitous learning - Active knowledge making - Multimodal meaning - Recursive feedback - Differentiated Learning - Metacognition The utilization of the rest of the affordances depends on the structure of the course realized by teachers.

Some of the most known mobile applications offer language learning through quiz style activities that focus on grammar, vocabulary, pronunciation and stimulus-response interaction, as well as text reconstruction activities that request students to decompose a text (Crowther et al., 2017). These two types of activities are presented in the form of multiple choice, matching, ordering, direct stimulus-response questions (Crowther et al., 2017). The interface of these mobile applications is quite easy to use and attractive to learners, offering also adaptive learning activities (Crowther et al., 2017; Hockly, 2015). Although the use of this kind of language learning practice requires some learner persistence and self-motivation (Hockly, 2015), they are popular among digital learners and the proof for this is the number of users of *Duolingo* app that has reached 30 million in 2014 (Lin, & Warschauer, 2015).

Virtual worlds and games, especially, MMORPGs (Massively Multiplayer Online Role-Playing Games) are other unstructured types of practices used in online language learning (Cope & Kalantzis, 2016; Hockly, 2015; Golonka et al., 2014). These practices can be online spaces where interaction between peers, with the instructor and with native speakers can occur, providing learners with opportunities to practice the content and, especially in our topic, to practice the second/foreign language in real-life discussions and life-like situations (Levak & Son, 2017; Golonka et al., 2014). Moreover, they offer support to the learner by providing content, making hints, giving responses, feedback and general guidance through the learning process (Cope & Kalantzis, 2016). Based on the features that MMORPGs present, it can be concluded that they deploy the following digital affordances: ubiquitous learning (they can be accessed anytime, from any place), multimodal meaning (images, audio, video, text, movement are used to communicate in the game), recursive feedback (learners receive feedback while playing, while communicating, which helps them improve during the process), collaborative intelligence (they work together with peers and instructors/native speakers and they build knowledge, which can be used later by other learners), metacognition (through their meaningful interaction with peers and native speakers, learners can think more deeply about the language their learning and make connections with their own first language), differentiated learning (learners learn the language though play, based on life-like situations and the can choose what to learn, who to talk to, how to interact with them, based on their needs and interests).

World of Warcraft (WoW) is an example of a MMORPG that due to its huge number of users from all over the world, it is a rich environment for informal, unstructured, online language learning. Players use the target language during their interaction with other players through the chat and also as part of their gaming experience. Players most often speak in English, but they can use other languages on the chat, depending on the server they are playing and the language of the users in this server. Sundqvist and Sylvén (2012) have conducted a research showing that players of *WoW* in Sweden who used English while playing improved more their linguistic competence comparing to other learners who were not playing the game.

Virtual worlds, such as *Second Life,* is another typical example of platforms used for online language learning. *Second Life* is a virtual environment where users from all over the world can interact with each other, with voice and text, using avatars and taking part in life-like situations (Levak & Son, 2017). Learners of second/foreign language using *Second Life* can interact with native speakers naturally or through specific educational tasks. Thus, they can practice the target language, but also they can immerse in the language's culture (Kuriscak & Luke, 2009; Burbules, 2006). *Second Life* and other similar virtual worlds are fruitful environments for active knowledge making and the implementation of collaborative intelligence, since they offer many opportunities for interaction, collaboration and knowledge producing (Levak & Son, 2017), elements that are sought by digital learners.

Another practice for unstructured online language learning is the one happening through language learning social network sites (LLSNS), such as *Livemocha*, *HelloLingo* and *Polyglotclub*. *Livemocha* was one of the first and successful LLSNS with about 10 million users, but it was shut down in 2016 and the above-mentioned sites constitute its alternative choices. LLSNS are interactive online communities that promote language learning through social networking and immersion (Chik & Ho, 2017; Park & Jee, 2009). Some of them consist of structured activities targeting reading, listening, writing and speaking through activities, but these are also combined with social network features, such as the creation of a public profile, the possibility to interact with peers and to build online communities (Chik & Ho, 2017; Park & Jee, 2009). However, the most essential feature of this type of practice is the existence of a community of learners and native speakers who collaborate towards language learning (Park & Jee, 2009). LLSNS offer the opportunity of flexible learning (*ubiquitous learning affordance*), because they are quite unstructured concerning content, and learners are able to determine their learning goals and the way to accomplish them, according to their needs and interests (*utilization of differentiated learning, collaborative intelligence and active knowledge making affordances*) (Chik & Ho, 2017). As a consequence, LLSNS are used as complimentary or an out-of-class practice and they are an ideal approach to learning one of the LCTLs (Less Commonly Taught Languages) (Chik & Ho, 2017), because learners are masters of their learning and an instructor does not need to be present.

Below are presented some additional examples of unstructured learning websites, platforms and mobile applications that exist in 2019, categorized and analyzed based on the correspondence of their main features with the framework of the Seven Affordances of the Digital (Kalantzis & Cope, 2012; Kalantzis and Cope, 2015; Cope & Kalantzis, 2016):

Considering the above taxonomy of OLL practices and tools (*Tables 1,2,3,4,5*), it can be concluded that both structured and unstructured practices of OLL are trying to correspond to the needs and characteristics of digital learners of our contemporary society by providing opportunities to make the seven e-learning affordances feasible and real. Mostly the practices that involve peer interaction or those that give some kind of freedom to the users, such as LLSNS or the tools with native speaker connection, have the potential to address the specific affordances that promote learners as knowledge produces and meaning makers. Usually these practices give the possibility to users to advance their critical thinking, act as the main characters in learning and create or get in contact with content that is tailored to their interests and needs. This potential corresponds to the contemporary characteristics of the digital multilingual learner, as they have been mentioned before in this chapter. Ideally, it would be of great value and interest in the field of OLL a practice that corresponds holistically to all those suggested digital features, taking into consideration the characteristics of the digital learner. Nevertheless, this is how the situation appears to be in the current period of time (2019) and it is well-known that technologies evolve fast, new applications are presented daily and they are in need of being examined towards their effectiveness in the Digital Age.

CONCLUSION

This chapter has the intention to provide an overview of the online language learning landscape and a snapshot of the digital multilingual learner. Due to wide dissemination and prevalence of multilingualism and multiculturalism, as well as the indispensable incorporation of technological features in the learning process during the digital era, the need to conduct more research in the field of online language

Table 4. Categorization and analysis of unstructured commercial tools

Commercial (paid tools with intention to make a profit through offering language learning)		
Application/Practice	**Main features**	**Digital Affordances deployed**
Babbel (2007) https://www.babbel.com/	● Website and mobile app ● Grammar and vocabulary learning based on real-life situations and conversations, on the learner's native language and related to their personal interests ● Content organized in small chunks ● Tips in the student's native language ● Speech recognition technology used for interactive dialogues ● Personalized review sessions.	- Ubiquitous learning - Multimodal meaning - Recursive feedback - Differentiated Learning
Memrise (2010) https://www.memrise.com/	● Website and mobile app ● Vocabulary focused ● Lists of words ● Pronunciation in audio ● Translation ● Videos of native speakers ● Chatbot.	- Ubiquitous learning - Multimodal meaning - Recursive feedback - Differentiated Learning
busuu (2008) https://www.busuu.com/	● Website and app ● Online and offline usage ● Free limited version: vocabulary flashcards ● Premium paid version: flashcards, conversations with native speakers, travel course, offline mode, quizzes, grammar exercises, vocabulary trainer, official certificate provided ● Partner with *Google Home* Assistant, offering voice-activated lessons in Spanish ● Virtual reality app for learning Spanish (for the Oculus Gear and Oculus Go). ● busuu skill for *Amazon Alexa* platform	- Ubiquitous learning - Multimodal meaning - Recursive feedback - Differentiated Learning
Mango Languages (2007) https://mangolanguages.com/	● Website and mobile app ● Self-paced, adaptive and personalized learning program ● Small word-by-word phrases in the target language and in English. ● Critical thinking exercises ● Memory-building exercises ● Grammar notes and cultural notes to understand the structure and context of the target language ● Interactive audio and color-coded words for better pronunciation and better matching of the target and native languages.	- Ubiquitous learning - Multimodal meaning - Recursive feedback - Metacognition - Differentiated Learning
FluentU https://www.fluentu.com/	● Website and mobile app ● Videos of various topics, with captions, translating each word of them ● Offering examples and images to learn the unknown words that you don't know ● Review activities (multiple choice, fill in the blanks, etc.)	- Ubiquitous learning - Multimodal meaning - Differentiated Learning
ImmerseMe (2017) https://immerseme.co/#home	● Website and mobile app ● Virtual Reality (VR)-based language learning, through pre-recorded videos ● This tool transfers you in a place of the country of the target language where you can practice it through Virtual Reality	- Ubiquitous learning - Multimodal meaning - Recursive feedback - Metacognition (in advanced language levels)
Mondly (2013) https://www.mondly.com/	● Website and mobile app ● Speech recognition technology used to check pronunciation and give instant feedback in conversations within the platform ● Memorization of core words and formation of sentences ● Dictionary alike vocabulary learning ● Verb conjugator ● Listening to conversations of native speakers ● Use of Augmented Reality (AR) technology to interact with animal, objects and more ● VR technology used to take part in conversations with virtual native speakers	- Ubiquitous learning - Multimodal meaning - Recursive feedback - Differentiated learning (based on the multiple types of language learning offered, through VR, AR, with speech recognition, etc.)
Tools and apps to connect language learners with native speakers		
iTalki (2007) https://www.italki.com/home	● Pay-per-lesson app ● Connection of language learners with native speakers-tutors ● The right tutor based on learner's level and needs ● Skype or another video conferencing platform is used for the lessons.	- Ubiquitous learning - Recursive feedback - Differentiated learning The utilization of the rest of the affordances depends on the structure of the course realized by tutors.
LangQ (2007) https://www.lingq.com/en/	● Website and mobile app (free and premium version) ● Online and offline function ● Translation of words and phrases from authentic texts ● Written and audio content library ● Ability to import your own content and translate it ● Connection with native speakers-tutors for live conversations ● Performance measurement during the learning process ● Keeps record of completed tasks	- Ubiquitous learning - Active knowledge making - Multimodal meaning - Recursive feedback - Differentiated learning

Table 5. Categorization and analysis of unstructured free online tools

Free Online Tools (free, usually focused on, but not limited to, developing one area of language learning, e.g vocabulary, pronunciation, everyday conversations, etc.)		
Application/Practice	**Main features**	**Digital Affordances deployed**
Duolingo (2011) https://www.duolingo.com/	● Website and mobile app ● Quiz and text reconstruction activities focused on grammar, vocabulary, pronunciation stimulus-response interaction, text decomposition ● Form of activities: multiple choice, matching, ordering, direct stimulus-response questions ● Easy to use and attractive interface ● Game-like features, e.g. point system (Crowther et al., 2017)	- Ubiquitous learning - Multimodal meaning - Recursive feedback - Differentiated learning
Beelinguapp (2016) http://beelinguapp.com/	● Mobile app ● Digital bilingual audiobook, in the target and native language of the user ● Ability to hear and read the text ● It helps to connect the writing of the words with their sounds and to hear the correct pronunciation.	- Ubiquitous learning - Multimodal meaning - Differentiated learning - Metacognition
MindSnacks (2013) http://www.mindsnacks.com/	● Mobile app with mini games ● Practice and improvement of memory of vocabulary and grammar ● The English part is targeted either for SAT vocabulary or for kids	- Ubiquitous learning - Multimodal meaning
LingoHut (2012) https://www.lingohut.com/en	● Website ● Learning of everyday vocabulary and its pronunciation ● Practice through mini games.	- Ubiquitous learning - Multimodal meaning
Drops (2018) https://languagedrops.com/	● Mobile app ● Game features ● Fun, fast-paced word games with mnemonic associations with pictures ● AR feature to make it look nicer. Not an immediate connection of the real environment with the learning content.	- Ubiquitous learning - Multimodal meaning - Recursive feedback
Tool that connects language learners with native speakers		
Easy Language Exchange (2016) https://www.easylanguageexchange.com/	● Language Exchange Community website ● Pairing of language learners with native speakers, based on the learner's level ● Resources such as language lessons and quizzes.	- Ubiquitous learning - Recursive feedback - Differentiated learning The utilization of the rest of the affordances depends on the structure of the conversations realized with the native speakers.
Lang-8 (2007) https://lang-8.com/	● Website ● Write in the target language and native speakers correct your texts	- Ubiquitous learning - Active knowledge making - Differentiated learning
HiNative (2014) https://hinative.com/	● Mobile app ● Connection with native speakers though chat ● Q&A about language and culture	- Ubiquitous learning - Multimodal meaning - Active knowledge making - Differentiated learning
MyLanguageExchange.com (2000) https://www.mylanguageexchange.com/	● Website ● Connection with native speaker peers, ● No instructor involvement ● Grammar learnt through practice ● For intermediate level learners.	- Ubiquitous learning - Active knowledge making - Multimodal meaning - Recursive feedback - Collaborative intelligence - Metacognition - Differentiated learning The application of all the digital affordances is possible depending on the type of interactions that will be created between peers.
TandemPlus http://tandemplus.umn.edu/	● Website ● Connection of learners with native speakers ● Language practice through Skype or another video conferencing platform ● Initiative of the University of Minnesota ● Participants are mostly students of the university paired with students from other universities	- Ubiquitous learning - Multimodal meaning - Differentiated learning The utilization of the rest of the affordances depends on the structure of the conversations realized with the native speakers.
PolyglotClub (2002) https://polyglotclub.com/	● Free language exchange community website ● Connection with native speakers ● Language practice online or face-to-face ● Review and correction of small texts by native speakers ● Language learning videos to improve language skills ● Language exchange face-to-face events in various places in the world	- Ubiquitous learning - Multimodal meaning - Recursive feedback - Differentiated learning The utilization of the rest of the affordances depends on the structure of the conversations and interactions realized with the native speakers.

learning increases. The practices that need to be cultivated for robust teaching and learning online were outlined above. Some features that are considered appropriate were suggested in order to be harnessed by educators, researchers and designers of digital technologies, having as objective to correspond to the needs of the multilingual digital learners. If this type of learning is to be effective and able to deal with the challenges that 'digital learners' may face, further research is needed, as well as provision of professional development to teachers and educational technology specialists when designing online language courses. Online education is an essential part of the future of education, and language learning should not be left out from this change. It should be transformed in such a way to facilitate digital learners' performance and address their specific needs in the contemporary Digital Age.

REFERENCES

Arkorful, V., & Abaidoo, N. (2015). The role of e-learning, advantages and disadvantages of its adoption in higher education. *International Journal of Instructional Technology and Distance Learning*, *12*(1), 29–42.

Bishop, J., & Verleger, M. (2013). *The Flipped Classroom: A Survey of the Research*. American Society for Engineering Education. Retrieved from https://peer.asee.org/22585

Blake, R., Wilson, N., Cetto, M., & Pardo–Ballester, C. (2008). Measuring oral proficiency in distance face-to-face, and blended classrooms. *Language Learning & Technology*, *12*, 114–127.

Blake, R. J. (2009). The Use of Technology for Second Language Distance Learning. *Modern Language Journal*, *93*(Supplement S1), 882–835. doi:10.1111/j.1540-4781.2009.00975.x

Blake, R. J. (2011). Current Trends in Online Language Learning. *Annual Review of Applied Linguistics*, *31*, 19–35. doi:10.1017/S026719051100002X

Bolton, K., & Graddol, D. (2012). English in China today: The current popularity of English in China is unprecedented, and has been fuelled by the recent political and social development of Chinese society. *English Today*, *28*(3), 3–9. doi:10.1017/S0266078412000223

Bransford, J., Brown, A., & Cocking, R. (2000). How People Learn: Brain, Mind, Experience and School (N. R. C. Commission on Behavioral and Social Sciences and Education, Ed.). Washington, DC: National Academy Press.

Brown, H. D. (2014). *Principles of Language Learning and Teaching* (6th ed.). White Plains, NY: Pearson Education, Inc.

Burbules, N. C. (2006). Rethinking the virtual. In J. Weiss (Ed.), *The international handbook of virtual learning environments* (pp. 1–33). Springer. doi:10.1007/978-1-4020-3803-7_1

Cheng, L. (2012). Editorial: The Power of English and the Power of Asia: English as Lingua Franca and in Bilingual and Multilingual Education. *Journal of Multilingual and Multicultural Development*, *33*(4), 327–330. doi:10.1080/01434632.2012.661432

Chik, A., & Ho, J. (2017). Learn a language for free: Recreational learning among adults. *System*, *69*, 162–171. doi:10.1016/j.system.2017.07.017

Clawson, J. G. (2006). Adult Learning Theory: It matters. In *Teaching Management: A Field Guide for Professors, Consultants, and Corporate Trainers* (1st ed., pp. 34–48). Cambridge, UK: Cambridge University Press. doi:10.1017/CBO9780511617850.004

Cook, V. (2016). *Second Language Learning and Language Teaching* (5th ed.). New York: Routledge; doi:10.4324/9781315883113

Cope, B., & Kalantzis, M. (2016). Chapter 1: Conceptualizing e-Learning. In *e-Learning Ecologies.* New York: Routledge. Retrieved from: http://neamathisi.com/_uploads/Conceptualizing-e-Learning.pdf

Crowther, D., Kim, K. M., & Loewen, S. (2017). The Implementation of ISLA in MALL Technology: An Investigation into the Potential Effectiveness of Duolingo. *MSU Working Papers in Second Language Studies, 8*(1). Retrieved from http://sls.msu.edu/soslap/journal/index.php/sls/article/view/103/79

Dixon, E., & Fuchs, C. (2015). Face to face, online, or MOOC - how the format impacts content, objectives, assignments, and assessments. In E. Dixon, & M. Thomas (Eds.), Researching language learner interactions Online: From social media to MOOCs (CALICO monograph series, volume 13) (pp. 89-105). Computer Assisted Language Instruction Consortium (CALICO).

Donryei, Z., & Csizer, K. (2002). Some dynamics of language attitudes and motivation: Results of a longitudinal nationwide survey. *Applied Linguistics*, *23*(4), 421–462. doi:10.1093/applin/23.4.421

Dornyei, Z. (2005). *The Psychology of the Language Learner: Individual Differences in Second Language Acquisition*. Mahwah, NJ: Lawrence Erlbaum Associates.

Dornyei, Z., & Al-Hoorie, A. H. (2017). The Motivational Foundation of Learning Languages Other Than Global English: Theoretical Issues and Research Directions. *Modern Language Journal*, *101*(3), 455–468. doi:10.1111/modl.12408

Dublin, L. (2003). If you only look under the street lamps.....Or nine e-Learning Myths. *The e-Learning Developers Journal*. Retrieved form: https://www.elearningguild.com/pdf/2/061603man.pdf

European Commission. (2012). *Special Eurobarometer 386: Europeans and their languages.* Brussels: DG for Communication. Retrieved from: http://ec.europa.eu/commfrontoffice/publicopinion/index.cfm/Survey/getSurveyDetail/instruments/SPECIAL/surveyKy/1049/p/2

Gao, X., & Lv, L. (2018). Motivations of Chinese Learners of Japanese in Mainland China. *Journal of Language, Identity, and Education*, *17*(4), 222–235. doi:10.1080/15348458.2018.1441029

Gao, X., & Zheng, Y. (2019). Multilingualism and higher education in Greater China. *Journal of Multilingual and Multicultural Development*, *40*(7), 555–561. doi:10.1080/01434632.2019.1571073

Gardner, R. C., & Lambert, W. E. (1959). Motivational Variables in Second Language Acquisition. *Canadian Journal of Psychology*, *13*(4), 266–272. doi:10.1037/h0083787 PMID:13855818

Gardner, R. C., & Lambert, W. E. (1972). Attitudes and motivation in second language learning. Rowley, MA: Newbury.

Godwin-Jones, R. (2014). Emerging technologies: Global reach and local practice: The promise of MOOCs. *Language Learning & Technology*, *18*(3), 5–15.

Golonka, E. M., Bowles, A. R., Frank, V. M., Richardson, D. L., & Freynik, S. (2014). Technologies for foreign language learning: A review of technology types and their effectiveness. *Computer Assisted Language Learning*, *27*(1), 70–105. doi:10.1080/09588221.2012.700315

Gotschall, M. (2000). E-learning strategies for executive education and corporate training. *Fortune*, *141*(10), 5–59.

Gotschall, M. (2000). E-learning strategies for executive education and corporate training. *Fortune*, *141*(10), 5–59.

Henry, A. (2017). L2 Motivation and Multilingual Identities. *Modern Language Journal*, *101*(3), 548–565. doi:10.1111/modl.12412

Hockly, N. (2015). Developments in online language learning. *ELT Journal*, *69*(3), 308–313. doi:10.1093/elt/ccv020

Holmes, B., & Gardner, J. (2006). *E-Learning: Concepts and Practice*. London: SAGE Publications.

ISTE. (2016). *ISTE standards for students. International Society for Technology in Education.* Retrieved from http://www.iste.org/standards/standards/for-students-2016

Kalantzis, M., & Cope, B. (2012). *New Learning: Elements of a science of education* (2nd ed.). New York: Cambridge University Press. doi:10.1017/CBO9781139248532

Kalantzis, M., & Cope, B. (2015). Learning and new media. In D. Scott & E. Hargreaves (Eds.), The SAGE Handbook of learning (pp. 373-387). London: SAGE Publications Ltd. doi:10.4135/9781473915213.n35

Kalantzis, M., Cope, B., Chan, E., & Dalley-Trim, L. (2016). Literacies (2nd ed.). Port Melbourne: Cambridge University Press.

Kennedy, G., Dalgarno, B., Bennett, S., Gray, K., Waycott, J., Judd, T., . . . Chang, R. (n.d.). *Educating the Net Generation - A Handbook of Findings for Practice and Policy*. Australian Learning and Teaching Council. Retrieved from: http://nla.gov.au/nla.arc-101641

Kickmeier-Rust, M. D., & Albert, D. (2013). Learning Analytics to Support the Use of Virtual Worlds in the Classroom. In A. Holzinger & G. Pasi (Eds.), *Human-Computer Interaction and Knowledge Discovery in Complex, Unstructured, Big Data* (pp. 358–365). Berlin: Springer Berlin Heidelberg. doi:10.1007/978-3-642-39146-0_34

Knowles, M. (1973). *The Adult Learner: A Neglected Species*. Houston, TX: Gulf Publishing Company. Retrieved from http://files.eric.ed.gov/fulltext/ED084368.pdf

Knowles, M. (1984). *Andragogy in Action. Applying Modern Principles of Adult Learning*. San Francisco: Jossey-Bass.

Kraemer, A. (2008). Formats of distance learning. In S. Goertler & P. P. Winke (Eds.), *Opening doors through distance language education: Principles, perspectives and practices* (pp. 11–42). San Marcos, TX: CALICO.

Kukulska-Hulme, A., & Viberg, O. (2018). Mobile collaborative language learning: State of the art. *British Journal of Educational Technology*, *49*(2), 207–218. doi:10.1111/bjet.12580

Kuriscak, L. M., & Luke, C. L. (2009). Language learner attitudes toward virtual worlds: An investigation of Second Life. In L. Lomicka & G. Lord (Eds.), *The next generation: Social networking and online collaboration in foreign language learning* (pp. 115–144). San Marcos, TX: CALICO.

Kużelewska, E. (2014). Unity in Diversity. The Language Policy of the European Union. *Studies in Logic*. *Grammar and Rhetoric*, *38*(51), 151–165. doi:10.2478lgr-2014-0037

Lamb, M. (2004). Integrative motivation in a globalizing world. *System*, *32*(1), 3–19. doi:10.1016/j.system.2003.04.002

Levak, N., & Son, J. B. (2017). Facilitating second language learners' listening comprehension with Second Life and Skype. *ReCALL*, *29*(2), 200–218. doi:10.1017/S0958344016000215

Lightbown, P., & Spada, N. M. (2013). *How languages are learned* (4th ed.). Oxford, UK: Oxford University Press.

Lin, C.-H., & Warschauer, M. (2015). Online Foreign Language education: What are the Proficiency Outcomes? *Modern Language Journal*, *99*(2), 394–397. doi:10.1111/modl.12234_1

Lv, L., Gao, X., & Teo, T. (2017). Intercultural Orientation as Japanese Language Learners' Motivation in Mainland China. *Critical Inquiry in Language Studies*, *14*(1), 1–24. doi:10.1080/15427587.2016.1217739

Malone, S. (2012). *Theories and Research of Second Language Acquisition. Reading For Day 2, Topic 2LA Theories* (pp. 1–11). Bangkok: SIL International.

Maltz, L., & Deblois, P. (2005). Top Ten IT Issues. *EDUCAUSE Review*, *40*(1), 15–28.

Margaryan, A., Littlejohn, A., & Vojt, G. (2011). Are digital natives a myth or reality? University students' use of digital technologies. *Computers & Education*, *56*(2), 429–440. doi:10.1016/j.compedu.2010.09.004

Maton, J. A. (2010). Beyond the "digital natives" debate: Towards a more nuanced understanding of students' technology experiences. *Journal of Computer Assisted Learning*, *26*(5), 321–331. doi:10.1111/j.1365-2729.2010.00360.x

Melnic, A.-S., & Botez, N. (2014). Formal, Non-Formal and Informal Interdependence in Education. *Economy Transdisciplinarity Cognition*, *17*(1), 113–118. Retrieved from http://www.library.illinois.edu/proxy/go.php?url=http://search.ebscohost.com/login.aspx?direct=true&db=bsu&AN=96883098&site=eds-live&scope=site

Nielson, K. B. (2011). Self-study with language learning software in the workplace: What happens? *Language Learning & Technology*, *15*(3), 110–129. Retrieved from http://llt.msu.edu/issues/october2011/nielson.pdf

Noels, K. A., Pelletier, L. G., Clement, R., & Vallerand, R. J. (2003). Why Are You Learning a Second Language? Motivational Orientations and Self-Determination Theory. *Language Learning*, *53*(S1s1), 33–64. doi:10.1111/1467-9922.53223

Oblinger, D. G., & Hawkins, B. L. (2005). The myth about E-learning. *EDUCAUSE Review*.

OECD. (2005). *E-learning in tertiary education*. Available at http://www.oecd.org/edu/ceri/35991871.pdf

Oliver, B., & Goerke, V. (2007). Australian undergraduates' use and ownership of emerging technologies: Implications and opportunities for creating engaging learning experiences for the Net Generation. *Australasian Journal of Educational Technology*, *23*(2), 171–186. doi:10.14742/ajet.1263

Park, M. J., & Jee, M. J. (2009). Livemocha as an online language-learning community. *CALICO Journal*, *26*(2), 448–456. doi:10.1558//jate2007v4i2.181

Prensky, M. (2001). Digital Natives, Digital Immigrants. *On the Horizon, 9*(5), 1–6. Retrieved from: http://www.marcprensky.com/writing/Prensky-DigitalNatives,DigitalImmigrants-Part1.pdf

Raikou, N., & Karalis, T. (2010). Non-Formal and Informal Education Processes of European Lifelong Learning Programmes for Higher Education: The Case of the Erasmus Programme in a Greek Peripheral University. *The International Journal of Interdisciplinary Social Sciences: Annual Review*, *5*(1), 103–113. doi:10.18848/1833-1882/CGP/v05i01/53064

Rubio, F. (2015). The role of interaction in moocs and traditional technology-enhanced Language Courses. In E. Dixon & M. Thomas (Eds.), Researching language learner interactions online: From social media to MOOCs (CALICO Monograph Series, Volume 13) (pp. 63-88). Computer Assisted Language Instruction Consortium (CALICO).

Schugurensky, D. (2000). *The forms of informal learning: towards a conceptualization of the field*. Retrieved from https://tspace.library.utoronto.ca/handle/1807/2733

Scott, D., & Beadle, S. (2014). *Improving the effectiveness of language learning: CLIL and computer assisted language learning*. London: European Commission, Education and Training. Retrieved from http://ec.europa.eu/assets/eac/languages/library/studies/clil-call_en.pdf

Strimel, G., Reed, P., Dooley, G., Bolling, J., Phillips, M., & Cantu, D. V. (2014). Integrating and Monitoring Informal Learning in Education and Training. *Techniques - American Vocational Association*, *89*(3), 48–54.

Sundqvist, P., & Sylvén, L. K. (2012). World of VocCraft: computer games and Swedish learners'L2 vocabulary. In H. Reinders (Ed.), *Digital Games in Language Learning and Teaching*. Basingstoke, UK: Palgrave Macmillan. doi:10.1057/9781137005267_10

Tao, Y. H., Yeh, C. R., & Sun, S. I. (2006). Improving training needs assessment processes via the Internet: System design and qualitative study. *Internet Research*, *16*(4), 427–449. doi:10.1108/10662240610690043

Tarone, E. (2015). Online Foreign Language education: What are the Proficiency Outcomes? *Modern Language Journal*, *99*(2), 392–393. doi:10.1111/modl.12220

Teo, T., Hoi, C. K. W., Gao, X., & Lv, L. (2019). What Motivates Chinese University Students to Learn Japanese? Understanding Their Motivation in Terms of "Posture. *Modern Language Journal*, *103*(1), 327–342. doi:10.1111/modl.12546

U.S. Census Bureau. (2015, June 25). *Millennials Outnumber Baby Boomers and Are Far More Diverse, Census Bureau Reports* (Report No. CB15-113). Retrieved from https://www.census.gov/newsroom/press-releases/2015/cb15-113.html

U.S. Census Bureau. (2011, April 21). *Language Projections: 2010 to 2020*. Retrieved from https://www.census.gov/hhes/socdemo/language/data/acs/Shin_Ortman_FFC2011_paper.pdf

Ushioda, E. (2017). The impact of Global English on motivation to learn other languages: Toward an ideal multilingual self. *Modern Language Journal*, *101*(3), 469–482. doi:10.1111/modl.12413

Ushioda, E., & Dornyei, Z. (2009). Motivation, language identities and the L2 self: A theoretical overview. In Z. Dornyei & E. Ushioda (Eds.), *Motivation, language identity and the L2 self* (pp. 1–8). Bristol, UK: Multilingual Matters. doi:10.21832/9781847691293-002

Van Deusen-Scholl, N. (2015). Assessing Outcomes in Online Foreign Language Education: What Are Key Measures for Success? *Modern Language Journal*, *99*(2), 398–400. doi:10.1111/modl.12234_2

Wang, W. (2015). Teaching English as an international language in China: Investigating university teachers' and students' attitudes towards China English. *System*, *53*, 60–72. doi:10.1016/j.system.2015.06.008

Wang, W., & Xu, H. (2015). *Annual Report on Foreign Language Education in China (2014)*. Beijing: Foreign Language Teaching and Research Press.

Zapata, G., & Lacorte, M. (2018). *Multiliteracies Pedagogy and Language Learning: Teaching Spanish to Heritage Speakers*. Palgrave Macmillan. doi:10.1007/978-3-319-63103-5