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Special Issue:

The evolution of CALL and current research in new media

Η εξέλιξη της τεχνολογικά υποβοηθούμενης γλωσσική εκμάθησης και οι ερευνητικές εξελίξεις στα νέα μέσα

Introduction

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This special issue of the peer-reviewed electronic journal RPLTL is dedicated to new media and pedagogies in foreign/second language learning. It offers a variety of articles that focus on the use of new media in combination with appropriate pedagogical orientations for the purpose of teaching or learning English as a foreign or second language. These 17 articles guide the reader through new applications and uses of new media in language learning such as Wikis, Facebook, Twitter, Blogs, Video games, Webquests, Digital storytelling, and Interactive whiteboards, but the focus is on their pedagogical uses. Important issues such as new media pedagogies, theoretical underpinnings of L2 learning, psychological, socio-cultural and cognitive parameters, new literacies, thinking skills, metacognitive and social skills are discussed. These theoretical issues and new media applications are explored in relation to L2 learning/teaching, language teacher education, distance learning, digital enrichment of textbooks and normalization. All of these applications can be placed in a wider context – that of Computer-Assisted Language Learning (CALL)¹.

The use of media for language learning has a long history and has been closely associated with English language learning. At the 1983 TESOL convention, the familiar term Computer-Assisted Language Learning (CALL) was agreed upon to describe language learning with the aid of a computer (Chapelle, 2001). In 1997, Levy defined Computer-Assisted Language Learning (CALL) as “the search for and study of applications of the computer in language teaching and learning” (Levy, 1997, p. 1). The term, according to Beatty (2003), encompasses the design of materials, technology, pedagogy and modes of instruction. Today, CALL has nothing to do with the *computer* in the sense that we once knew it in the age of Web 1.0, where the Internet was a static data bank of websites that people read without interacting. Thus, the term has been questioned, but has not been replaced generically (Jarvis and Krashen, 2014). In the age of Web

2.0, approximately after 1992, the web became an interactive and social environment that facilitated the collaboration between people. In this age, social learning networks, communities of practice, communities of learning became common words. The next fundamental change that we can see approaching is what can be called “Web 3.0”, which merges mobile Internet devices, entertainment systems, etc. even more and makes them ever present at work, at home, or wherever we go. In other words, Web 1.0 can be characterized as a web of cognition, Web 2.0 as a web of communication and Web 3.0 as a web of co-operation (Aghaei, Nematbakhsh et al., 2012). Web 1.0 which was the first generation of the web which, according to Berners-Lee, could be considered the read-only web and also as a system of cognition. Web 2.0 was defined by Dougherty in 2004 as a read-write web as the technologies of web 2.0 allows assembling and managing large global crowds with common interests in social interactions. Web 3.0 includes two main platforms, semantic technologies and a social computing environment which can organize a large number of the social web communities (Aghaei, Nematbakhsh et al., 2012). Through all of these phases, CALL has changed and is changing in order to encompass the wide range of facilities available to the language learner and teacher.

Historically, CALL has been outlined by various researchers². One of the earliest accounts was that of Ahmad (1985), who referred to applications in the United States and Great Britain from the 1960’s to the 1980’s. CALL from 1965-1975, he claimed, was mainly geared towards the teaching of written language and towards beginner students (1985). He outlined important early applications such as the Stanford Project and Plato System using early mainframe computers for various subjects, as well as language learning.

Following that, Levy (1997) referred to specific applications in three periods from the 1960’s to the 1990’s. According to Levy, applications in the 1960’s and 1970’s were based on empiricist theory and behaviorism. CALL software was based on drill and practice exercises. Applications in the 1980’s were based on humanistic methods that engaged the whole person, their emotions and affective factors (Moskowitz, 1978 in Levy, 1997). An important element in this state was the introduction of the microcomputer. The 1990’s according to Levy were marked by the Internet. During this phase he referred to the International email Tandem Network, which was begun in 1993 by Brammerts (1995, in Levy, 1997) and linked universities around the world for the sake of language learning. Levy (1997) surveyed CALL material and related each application to underlying conceptual frameworks. He differentiated between research-based and practitioner-based CALL. Practitioner-based CALL was based on a specific language teaching problem that the author believed could be solved with new technologies whereas research-based CALL relied on theory to guide materials development. Material in this category began with theories of language learning or theories of instruction. Moreover, Levy (1997) exemplified the relation of theory to practice by referring to Richards and Rodgers’ (1986) hierarchical levels of Approach, Design and Procedure beginning with approach or theories about the nature of language and language learning.

The history of CALL up to the late 90’s was outlined by Warschauer (1996) and Warschauer and Healey (1998). They referred to three phases of CALL: behavioristic CALL, communicative CALL, and integrative CALL. Each stage corresponded to a certain level of technology as well as a certain pedagogical approach. They outlined the first phase of CALL as behavioristic CALL which began in the 50’s and was implemented in the 60’s and '70s. It was based on behaviorist theories of learning that were dominant at the time and entailed repetitive language drills. They outlined the second phase of CALL as applications based on the communicative approach to teaching in the 70’s and 80’s. The third stage was referred to as integrative CALL and was based on multimedia computers and the Internet which, as Warschauer stated (1996), has had the

greatest impact on language teaching. Although their outline of the history of CALL comes up to the end of the 20th century, what they refer to as integrative CALL still seems to be relevant today with emphasis placed on multimedia applications, synchronous and asynchronous communication, blogs, podcasting, automatic translation, electronic dictionaries, online learning environments, Internet-based distance learning, etc.

Chapelle (2001) traced computer-assisted instruction as far back as the 1950's in the U.S.A.; however, she stated that examples of CALL were not documented until the 1960's. The first applications dealt with the foreign language instruction in higher education. She referred to pioneers in the field such as Collett in New Zealand who used the university's mainframe for computer-assisted instruction, an idea that he got from a colleague in physics. The applications in the 1960's and 1970's were described as small-scale individual projects with a few larger efforts (Chapelle, 2000). The applications in the 1960's were guided by the available technology, i.e. large mainframe computers which are not yet at this stage available to the public. Thus, applications were limited to universities who had such computers available.

In contrast to earlier behavioristic approaches to CALL, the 1980's according to Chapelle were influenced by the popularity of Krashen's view of second language acquisition (SLA) at the time which stressed unconscious acquisition of language rather than conscious learning (Chapelle, 2001). This led to communicative CALL, which according to Underwood (1984, in Chapelle 2001) was based on the creation of a learning environment that catered for language acquisition and was drawn from Krashen's views on acquisition. Chapelle criticized these applications based on acquisition without explicit instruction as failing to provide empirical evaluation as it was based on developers' or users' opinions (Chapelle, 2001). These applications were popular as they were able to be customized, i.e. the simplicity of the program allowed instructors to construct their own learning activities and input their own texts.

Two other factors which influenced applications in the 1980's were advances in corpus linguistics such as the computer assisted concordancer activity or software used to identify words or expressions that were requested by the user and research on individual differences. Loritz (1995, in Chapelle, 2001) referred to the 1980's as the *adolescence* of CALL or a time of exploration when old ways were discarded and new applications began. Although computer-mediated communication was available since the 1960's, when users could exchange synchronous and asynchronous messages using mainframe computers, the full impact of this was not felt until the 1990's when networked computers expanded the potential of CALL activities. The effects of the Internet were numerous. Software development could be expanded to reach a larger number of students when available on the Web. Students could participate in autonomous language learning and self-assessment. Interaction was not limited to interaction with the computer or other students in the class but with learners in other parts of the world from specific classes chosen by instructors or self-selected participants who were willing to participate in computer-mediated communication for language learning (Paramskas, 1993; Vlachos, 2005; Warschauer, 1995a, 1995b in Chapelle, 2001) or collaborative activities in the form of sister classes (Kazoullis, 2011; Cummins, Brown, & Sayers 2007).

Bax (2003) defined CALL through three different approaches rather than historical periods: restricted CALL, open CALL and integrated CALL. Restricted CALL, similar to Warschauer and Healey's behaviourist CALL, referred to restrictions of software, theories of learning, activity types, teachers' roles, feedback to students, learning theories, software and activity types. Open CALL was described as open in dimensions such as feedback to students, software types, the role of the teacher, etc. (2003). Integrated CALL, Bax claimed, did not exist to a significant

degree when his paper was written but should be the goal in the future (2003). He claimed that applications (i.e. in 2003) were still according to the open CALL approach. Integrated CALL was linked to normalization or the stage when technology is so widely used that it becomes invisible (2003).

As far back as 2006, Davies referred to the bewildering array of technology that the language teacher was confronted with ranging from the radio to the Internet, DVD-ROMS, iPod and similar devices. He described the impact of the Web on the language teaching profession as an explosion; however, he claimed that the Web has caused us to leap backwards in terms of pedagogy, claiming that early CALL materials on the Web lacked interactivity, feedback and creativity. This bewildering array of technology is more intense today, with numbers of free applications available to the language teacher on the Internet.

Hoven (1999) set a new tangent to CALL, proposing a design model for humanistic multimedia Computer-Enhanced Language Learning (CELL). She used the term CELL rather than CALL (Computer-Assisted/Aided Language Learning) to stress the humanistic elements of computer use in language learning. CELL, she claimed, brought the real world into the classroom, made learning more relevant, developed the learners' sense of responsibility, promoted non-linear and co-operative learning, helped reduce the need for a meta-language, and changed the role of the teacher (Batley & Freudenstein, 1991, in Hoven, 1999). Cummins and Sayers (1995) also gave importance to the human element of using technology. According to Pennington and Stevens (1992) the shift from the 1990's on was towards humanistic approaches with emphasis placed on communication, hence the term, Computer Mediated Communication (CMC).

Creativity or using CALL applications in an imaginative manner was also an issue as far back as 2006, giving the learner a more active and creative role in the learning process. Weiss (2006) distinguished between virtual learning and learning virtually (2006). He defined virtual learning as digital/computer-based learning environments (2006) and explained that learning virtually is broader in that it allows for imaginative possibilities which include environments utilizing a broad array of traditional media and contexts for meaning making (2006). Weiss' focus was on the imaginative use of technology (Weiss, 2006).

Web-based language learning environments today are based on a combination of pedagogical orientations (Skourtou, Kourtis-Kazoullis & Cummins, 2006; Kourtis-Kazoullis, 2008) but focus mainly on socio-cognitive (Spantidakis, 2012), social constructivist and transformative orientations (Cummins, Brown & Sayers, 2007; Kourtis-Kazoullis & Skourtou, 2007). The use of Information and Communication Technology (ICT) in combination with traditional pedagogy, which was common in the past, focuses on the transmission of information and skills in language teaching, the teaching of language structures and forms with little emphasis on internalization of meaning or active communicative/authentic use of the language (Cummins 2000). Constructivist/progressive pedagogy and ICT encourages students to actively construct meanings and become cognitively engaged in challenging projects and activities (Cummins, 2000) and is based on sociocultural theory. Transformative pedagogy in an ICT environment has a social basis and uses collaborative critical inquiry to enable students to analyze and understand the social realities of their own lives and of their communities (Cummins, 2000). Cope and Kalantzis (2000) also suggest similar orientations and refer to a pedagogy based on social transformation (Kalantzis & Cope, 2008).

Cummins, Brown and Sayers (2007) focus on transformative approaches in environments of diversity and technology and discuss ways in which literacy can be enhanced through

technology in today's diverse classrooms. They argue that traditional pedagogical approaches have failed to bring about any improvement, especially in the disadvantaged students' literacy because it ignores the demands of the information-age, e.g., globalization and technological change. They suggest that literacy and technology should be used to develop critical literacy by adopting a multiliteracies and a transformative orientation to pedagogy. The design principles they propose for technology-supported instruction include cognitive challenge and opportunities for deep processing of meaning; active self-regulated collaborative inquiry; and affective involvement and identity investment.

Socio-cognitive, social constructivist and transformative orientations lead us to the age of Web 2.0. Peachey (2014), outlines the age of the Web 2.0, stating that what CALL has to offer is: (a) speed; (b) web based software and applications; (c) platform based services (such as YouTube, Digg, Blogger), (d) content that is user generated; (e) rich media content such as audio, (f) video and interactive games; (g) complex social interactions, (h) new business models and (i) democratization. According to Peachey (2014), Web 2.0 offers teachers a variety of tools for socialization, collaboration, creativity and sharing. Through socialization students can use the language and skills they are learning to build networks and develop relationships with real people. Students can work together with others to construct and share real knowledge. They can create genuine products, in a wide range and combination of media, and the tasks and activities they do and the people they communicate with to do them are real and motivating. Furthermore, they can share what they create and learn from each other.

On the one hand, the vast variety of applications available today often leave the teacher bewildered as to what to use and how to use it. Stephens (2014, p. 1) describes this phenomenon as a "fire hose of information, gushing all around us". He states that "the trick to benefiting from this growing plethora of resources is to work out strategies to sip from the hose without being knocked over by the water rushing past" (Stephens, 2014, p. 1). On the other hand, Siemens (2005) proposed a learning theory for the digital age which he entitled Connectivism, i.e. the integration of principles explored by chaos, networks, complexity and self-organization theories. In other words, the chaos of the Internet is a part of learning, especially in the age of Social Networks. Students are encouraged to work within blended learning environments to develop media literacy, lifelong learning skills and the autonomy to work at self-access and discover learning by themselves (Vlachos, 2009).

Despite whatever difficulties are created through the fast pace of change in the world of new media, the teacher is competing against methods of learning that their digital native students (Prensky, 2009) are familiar with. These tools allow for: (a) autonomy as individuals can make decisions about their personal learning, (b) diversity as the student is provided with multiple tools, (c) interactivity as communication and cooperative learning is possible and (d) openness as the material provided today on the Web is open access and open content. Simply proving content for learning today is insufficient. If teachers want to "play the game" today, they have to be part of the game and approach learners with tools that they are familiar with and already use in their everyday activities. Students today are living in a technology rich world or a media rich society and are learning without the teacher anyway. Language teachers can harness what the students already know and help them use it to learn English in an organized and effective manner. Technology then becomes a cognitive partner that promotes critical thinking, problem solving, communication, collaboration, team work, self-management, creativity, team work and life-long learning. These 21st century skills can be used to help students learn another important 21st century skill: language learning. These 21st century skills tie in with the first article of the special issue and how we chose to present the articles in this special issue.

This special issue opens with Sophia Papaefthymiou-Lytra's article, "L2 lifelong learning/use and new media pedagogies". She briefly reviews what L2 lifelong learning entails in the context of new media pedagogies and refers to the theoretical underpinnings of L2 learning and to psychological, socio-cultural and cognitive parameters that support and promote L2 learning and development as a lifelong process. She goes on to outline pedagogical principles and practices that support L2 lifelong learning in relation to new media pedagogies and discusses the new roles and functions for foreign language teachers in the context of new media pedagogies. This article serves as an umbrella for the articles that follow.

In an extensive interview that she gave to RPLTL editor-in chief, Bessie Dendrinou explores the topic of technology in action for language education and research at the Faculty of English, University of Athens. Dendrinou provides readers with a comprehensive insight as to the ways in which new technologies have been used creatively to facilitate the work being done at the Research Centre for Language Teaching Testing and Assessment (RCeL): research and product development for the Greek foreign language exams that lead to the certification of language proficiency (KPG), the English for young learners programme in Greek primary schools (PEAP), the pre-service teacher education programme at the Faculty of English, and other major projects that the Centre is carrying out.

Bessie Mitsikopoulou's paper "Materials design for the digital enrichment of the Greek EFL textbooks" provides an overview of the pedagogical design and the types of digital materials that were produced to enrich the Greek State EFL textbooks for primary and junior high school in the context of the Digital School Project. She initially presents the principled approach to enrichment that was developed for the production of digital materials and goes on to analyze the different types of digital materials that were produced, following a specific categorization of EFL materials. The findings in her paper suggest that digital enrichment should include a variety of teaching materials in order to offer EFL teachers a variety of tools and applications to enrich their teaching methodology and to enhance EFL learners' experiences with the textbook, while at the same time, should take into account varying learning styles and needs.

Evdokia Karava's paper titled "Developing an online distance training programme for Primary EFL teachers in Greece: Entering a brave new world" presents a distance online training course for primary EFL teachers. The paper discusses the pedagogical and the instructional design principles of the e-course and provides an example and suggestions for future e-training courses that are founded on the premises of distance learning and blended learning environments.

The paper entitled "Teacher development and coll@bor@tion", which was written by Evangelia Karagianni explores Greek primary school EFL teachers' views on issues related to more effective approaches to in-service teacher training. It goes on to explore aspects of the experimental approach that was adopted by the researcher in an attempt to circumvent some of the shortfalls of the existing in-service teacher training system as they are described in the literature. Her research is based on principles of adult life-long learning, as well as the effects that reflection and collaboration as learning modes can have on continuous professional development.

Karen Woodman writes on the "Educational paradox: The hidden obstacles to the integration of mobile phones in the language classroom". Her paper reports on the findings of an international telecollaboration study using Facebook, in which teachers studying in M. Ed programs in Australia and Greece discussed the use of mobile phones in language classrooms. Results

suggest that invisible barriers exist in the use of mobile phones in the classroom, including bans on use in schools, lack of familiarity with educational uses for mobile phones, and negative perceptions about mobile phones, specifically in terms of classroom management.

The paper “Exploring the use of Wikis in developing students’ writing skills in the EFL classroom” written by Myrsini Kontogeorgi explores the integration of wiki technology in writing instruction by means of a student wiki journal. The research involves factors such as: motivation, collaboration, electronic literacies and process writing and seeks to investigate the extent to which these factors can substantially contribute to improving learners’ writing skills. She concludes that wiki journals increase motivation, develop electronic literacies, promote a sense of “pride of authorship” and facilitate collaboration. Furthermore, wikis can prove to be an indispensable tool for process writing as revisions can be performed and monitored without the restraints of time and place, thus enhancing learner autonomy as well as critical thinking and metacognition. Her research also outlines the drawbacks such as to time management issues both for learners and the instructor.

Maria Mexi and Kosmas Vlachos discuss the topic “Using Wikis to encourage the Greek primary steps of the e-ELP”. Their paper outlines the implementation of the electronic European Language Portfolio (e-ELP) via a wiki platform in a sixth grade class of a state primary school. This particular paper deals with the ‘Language Biography’ section of the ELP and the extent to which its content, layout and use of the proposed self-assessment cards can promote the participants’ self-assessment process in terms of motivation, meta-cognitive awareness and autonomy.

Maria Paroussi’s paper “Blogging in a blended-learning pedagogical model, as a medium for the enhancement of 6th grade primary school learners writing skills and e-literacies” is based on research which explores the efficacy of a blended-learning or hybrid format learning environment, i.e. the combination of a weblogging application with conventional face-to-face classroom tuition in a particular EFL context. Her findings highlight issues concerning the EFL classroom and reinforce her initial assumptions that heightens young learners’ intrinsic motivation which in turn helps enhance their writings skills, boosts their metacognitive strategies, promotes autonomous collaborative learning and ensures a higher level of new literacy achievement.

In her paper “Integrating Computer Mediated Communication (CMC) and online networking in the teaching of English as a foreign language in high school”, Efthymia Koufadi explores Computer-Mediated Communication’s (CMC) potential to trigger students’ motivation and positive attitudes, and create fruitful conditions for the development of cognitive, metacognitive and social skills paving the way towards their detachment and autonomy. Additionally, it seeks to shed light on the effectiveness of CMC in promoting intercultural awareness, intercultural communicative competence and ultimately in deconstructing stereotypical attitudes and in refraining from racism.

In his paper, “Social networking and language learning with Twitter” Norman Fewell discusses the latest trend among a popular array of Web 2.0 technologies: microblogging. He defines microblogging as a communicative tool that allow users to stay in contact with friends in a social network by texting short messages of often two or three sentences. He states that microblogs have grown significantly in popularity, appealing to users as practical alternatives to reading and writing lengthy complex messages often found in traditional online mediums. He claims that the rising trend of microblogging presents educators with a chance to harness its

popularity as a communicative tool for students to increase L2 utilization outside the classroom. His article examines the use of the microblogging in a project aimed at promoting L2 communication for EFL learners outside the classroom.

Sevasti Papadopoulou and Kosmas Vlachos jointly wrote the paper “Using Digital Storytelling to develop Foundational and New Literacies” which presents research conducted in a Greek Primary school on the use of Digital Storytelling to develop Foundational and New Literacies as well as improve learners’ writing skills through their engagement and collaboration. The researchers’ aim was to promote young learners’ ‘learning to write’, a learner-centered approach to the teaching of writing, through the development of Foundational as well as Information and Media Literacies. They outline how Digital Storytelling can lead to problem-solving and higher order thinking skills, critical and creative thinking and decision-making.

Alexandros Palaiogiannis’ paper “Using videos games to foster strategy development and learner autonomy within a secondary school context” presents research that focuses on the integration of commercial video games in a Greek Senior Secondary School context. The purpose of his research is to investigate whether such games have the potential to foster the development of language learning strategies and learner autonomy. In order to reach specific game-related goals, student gamers carried out vocabulary and writing tasks, thus developing their vocabulary learning and writing skills at the same time. Although the generalisability and transferability of the results to similar situations cannot be ensured, due to the contextualised nature of the study, research participants were evidenced to employ a variety of strategies, with social strategies being especially associated with the female sample population, as well as feelings of autonomy and independence, while teacher support and guidance were found to be conducive to the development of autonomy.

In her paper, “Designing and implementing a Webquest in an EFL young learners context” Christina Popota presents the design, the implementation and the findings of action research conducted in the fifth and sixth grades of a Greek state primary school. Her research aims at examining whether a Webquest can help students acquire new literacies and high order thinking skills, develop their intelligences and reading strategies and have a positive impact on their motivation, attitude and stress.

Eleftheria Koutsogianni writes on the “Promoting motivation and autonomy through Webquest implementation in junior high school EFL context”. In her paper, she presents the outcomes of the experimental implementation of a series of Webquest sessions to an English as a Foreign Language (EFL) teaching context which took place in a Greek state Junior High school. The purpose of her research is to demonstrate the impact that the Webquest application had on the promotion of motivation and autonomy throughout the learning process. Her results signify that it leads to the enhancement of intrinsic motivation, individual interest and a positive disposition towards the target language. Her research also investigates learners’ autonomy in handling and acquiring knowledge with the aid of Webquest technology. She concludes that the integration of Webquest application into the curriculum can substantially affect learners’ motivation and self-directed learning.

Sophia Basmati’s paper “Interactive Whiteboards: EFL teachers’ practices and pedagogy in the Greek reality” focuses on the electronic interactive whiteboard (IWB) and records the perceptions and practices of teachers who use it in Greek private foreign language centres, where IWBs are rapidly being adopted as a multimedia teaching tool. The purpose of her paper is to explore the value of IWBs as an instructional tool. She draws conclusions pertaining to

successful IWB implementation in education. Her research reveals teachers' satisfaction with most aspects of IWB use but also the need for the training of teachers on the use of IWBs in a way that shifts their pedagogy towards more interactive, social and student-centred learning.

In his paper "Investigating normalisation: Do teachers of English in Greece integrate technology in their everyday teaching practice?" Spiros Spiris examines the extent to which teachers of English in Greece who are familiar with educational technology via seminars or relevant courses integrate technology into their teaching practice. He explores whether this integration approaches 'normalisation', what the possible obstacles were, and which solutions can be used to overcome these obstacles. The outcomes of his research indicated that teachers in Greece are close to 'normalisation' and generally have a favourable attitude towards technology. However, certain changes in their teaching practice still need to occur in order to ensure the effective integration of technology.

We close this special issue with a paper on normalization or "the stage when a technology is invisible, hardly even recognized as a technology, [and] taken for granted in everyday life" (Bax, 2003: 23). Normalization is the true integration of technology, in the sense that technology is a tool used naturally in the teaching process in such a way that it becomes unnoticed (like a pen or a book). This is point where "new" media or "new" technologies cease to become "new" and become something common. Hopefully, this special issue will provide language teachers with ideas for new applications in their classrooms and will lead to normalization, but at the same time it will hopefully stress the need to base these applications on a strong pedagogical foundation and appropriate L2 theories.

Notes

1. A variety of terms have been used to describe the use of new media and language learning, such as CALL: Computer-assisted language learning (the generic term); sometimes computer-aided language learning; CALI: computer-assisted language instruction (more teaching oriented; less learner focused); CBLT: computer-based language training (views elements of language learning as "training"); CELL: computer-enhanced language learning (computer's role is less central); TELL: technology-enhanced language learning (accommodates more than just computers); ICTinLT: information and communication technologies in language teaching (focuses more on tool use); NBLL: network-based language learning; and web-enhanced language learning (WELL). Acronyms and terms have been used to describe specific applications such as: mobile assisted language learning (MALL); Google assisted language learning (GALL); blog assisted language learning (BALL), etc. In this paper we will use the generic term Computer-Assisted Language Learning (CALL), although it does not describe language learning in the age of Web 2.0 or Web 3.0. Despite this, this term is used by important associations in the field such as EUROCALL. (Sometimes, it is referred to Computer Assisted Language Learning, without the hyphen).
2. The historical outline of this paper is based on Kourtis-Kazoullis (2013).

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