The evolution of CALL and current research in new media

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Research Papers in Language Teaching and Learning

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EDITORIAL

Throughout history, pedagogy has always integrated technology, in one way or another. In recent years, as computer and Internet technologies have evolved to acquire a ubiquitous role in our lives, developments in Information and Communication Technologies (ICTs) have asserted a central function in all forms of learning, and even more so in language learning. This Special Issue of Research Papers in Language Teaching and Learning focuses on these developments and, in particular, on the nature and impact of “new media” in English language teaching and learning.

But how best to define ICTs? In 2001, the United Nations Development Programme (UNDP) offered the following definition of the term: ‘ICTs are basically information-handling tools [...]’. They include the ‘old’ ICTs of radio, television and telephone, and the ‘new’ ICTs of computers, satellite and wireless technology and the Internet. These different tools are now able to work together, and combine to form our ‘networked world’ [...] which reaches into every corner of the globe’. To that definition we could add the growing sense of community and collaboration between people brought about through the so-called “new technologies” (which include the social media and numerous applications for phones, tablets and PCs).

This Special Issue hosts reports on the implementation of many different facets of ICTs and new media, such as webquests, blogging, twitter, wikis, interactive whiteboards, forms of digital media production such as digital storytelling, as well as uses of mobile phones and video games, and how they can facilitate language learning and the promotion of various language and communication skills. There are papers on all levels of schooling (primary and secondary) and tertiary education (an in-depth account of the use of ICTs at the Faculty of English at the University of Athens), together with discussions of the ways in which web technology can enhance teacher communities and learner communities, and an awareness of the broader meaning good use of ICTs can have for lifelong learning.

What permeates all papers is the awareness that what differentiates the “new” technologies from the “old” technologies is that the former are not just a means of helping learners build up language skills, they are a fundamental ingredient in the construction, and essential empowerment, of learner and teacher communities. In fact, at their best, the new technologies have provided what language learning needed for a very long time, namely, a seamless link between learning the structures and functions of the foreign language and using it in authentic ways that reflect the way people live, express themselves and communicate with one another today and, inevitably, in the years to come.

I would like to sincerely thank the guest editors of this special issue, Dr Vasilieia Kourtis-Kazoullis and Dr Kosmas Vlachos, for putting this work together and for their diligence in supervising the production of this issue.

Nicos C. Sifakis
Editor-in-Chief

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Special Issue:
The evolution of CALL and current research in new media

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

Introduction

Vasilia Kourtis-Kazoullis and Kosmas Vlachos

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-Kazouillis & Cummins, 2006; Kourtis-Kazouillis, 2008) but focus mainly on socio-cognitive (Spanlidakis, 2012), social constructivist and transformative orientations (Cummins, Brown & Sayers, 2007; Kourtis-Kazouillis & 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 Dendrinos explores the topic of technology in action for language education and research at the Faculty of English, University of Athens. Dendrinos 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 blogging 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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L2 lifelong learning/use and new media pedagogies

Sophia PAPAEFTHYMIOU-LYTRA

The aim of this paper is threefold. First, I will briefly review what L2 lifelong learning entails in the context of new media pedagogies. I will briefly refer to the theoretical underpinnings of L2 learning and make reference to the psychological, socio-cultural and cognitive parameters in particular that support and promote L2 learning and development as a lifelong process. Second, I will attend to the most salient pedagogical principles and practices that support L2 lifelong learning in relation to new media pedagogies. Third, I will advocate new roles and functions for FL NN teachers in the context of new media pedagogies. The overarching assumption of my contribution is that the above mentioned dimensions contribute to ‘learning a foreign language(s) for lifelong use’.

Key words: new media, L2 lifelong learning/use, new media pedagogies, teachers’ roles
1. Introduction

ICT technologies such as the Internet, multi-media, tablets, i-pads, i-phones etc., which developed in the last thirty years or so, have become important in our lives, while at the same time they have helped us broaden our horizons by way of shrinking our world. They have been important for personal and professional communication among individuals and groups, for business and world markets as well as for sharing cultural, social, political and ideological presuppositions and beliefs. Consider, for instance, their influence in the Arab spring uprisings.

Although computer assisted language learning (CALL) has been at the forefront of foreign language education since the early 1980s as a new and innovative approach at the time for L2 learning and development, the real impetus came with the advance of the ICT technologies in the 1990s and their adoption by educators and educational authorities to assist in the education process in general and in FL learning and FL teacher training, in particular. Consequently, ICT technologies have provided a new and fertile ground not only for communication and information purposes but also for learning and teaching purposes. But what is it that new media as educational tools and new media pedagogies can offer to L2 learners and teachers alike? Or, to put it differently, what are the opportunities that new media pedagogies engender for successful L2 lifelong learning/use?

This paper, firstly, deals with the theoretical underpinnings of L2 learning in the context of new media. These underpinnings draw on several theoretical perspectives such as the socio-constructivist approach, Gardner’s (1983) theory of multiple intelligences as well as experiential learning theory and critical inquiry learning as purported by Dewey (1933) in the context of diversified and individualized instruction in the language classroom. Secondly, it addresses the psychological, socio-cultural and cognitive parameters that support and promote L2 learning and development as a lifelong process. Thirdly, the paper attends to the most salient pedagogical principles that support new media pedagogies and discusses the benefits of typical and non-typical education practices originating from them. Fourthly, it alerts the reader to the changing role of the teacher in the context of new media pedagogies. Lastly, it recaps on the issues discussed by focusing on their lifelong effects on learners and teachers.

2. L2 learning in our times: an overview

Although learning at schools is primarily based on institutional practices, since teachers are expected to follow a predetermined curriculum and use materials usually decided by the Ministry of Education, introducing ICT in the classroom can move the language learning pendulum towards more flexible and independent practices that suit individual learners’ needs and aspirations. The benefits derived from ICT literacy in the school context are multiple for learners and teachers alike. They exemplify a variety of theoretical underpinnings for language L2 learning/teaching as well as psychological, socio-cultural and cognitive factors that are further enhanced and developed when L2 learners/users employ a variety of appropriate learning/pedagogical strategies that will help them develop as autonomous learners, become creative and critical thinkers and doers and embrace lifelong strategies for L2 learning. In short,
the usefulness of new media for L2 learning in our times is based on the following theoretical underpinnings and parameters to which I will now briefly refer.

2.1. Theoretical underpinnings

As socio-constructivists maintain, learners construct knowledge through communicating with others. In the context of L1 learning, these others can be parents, siblings, other close relatives, caregivers, teachers, friends and so on, who play an important role in helping them learn, communicate and socialize and ultimately become accepted members of the different groups and communities they partake (Cameron, 2001; Papaefthymiou-Lytra, 2009).

In the context of ELT, communication and learning are maintained when learners are involved in communicative tasks, projects and activities with their classmates, in other words, when reading, listening, writing, viewing or surfing the new media among others for some purpose or for pleasure. Hence, following Bruner’s (1983) argument that language learning and communicating is the outcome of the interplay of language, communication and instruction, I incorporate this concept in my framework for L2 lifelong learning and new media pedagogies in order to justify the use of new media as pedagogical tools to develop L2 language learning and communicating. Concerning language in use for learning/teaching purposes, it is important to remember that new media provide L2 learners with a wealth of authentic communicative language input which is produced by and addressed to either L1 or L2 language users world wide. In this way, input in the language classroom is not restricted in the learning materials determined by the educational authorities or the FL teacher. Besides, new media provide L2 learners with opportunities to practice all skills, i.e. reading, listening, writing as well as the oral skills while surfing the internet with their partners in order to complete a task. Their partners can be their classmates or they may now come from other countries. What’s more, new media come equipped with all sorts of elements such as multi-lingual dictionaries, hypertexts, step-by-step guidelines on how to do things, etc. I consider these to be useful learning tools that can often replace teachers, specialist instructors or parents as helpers or advisors. In this sense, learners can further utilize the new media as learning tools by adopting and adapting the elements, instructions and guidelines provided as strategies for learning and communicating. Thus, I argue that the dimension of instruction and in particular of self-instruction is inherent in new media. In this sense, new media pedagogies implement the socio-constructivist principle that L2 learning is the outcome of the interplay of language, communication and instruction. In this context, new media have an important role to play supporting L2 learners/users in the construction of L2 knowledge and experience.

Following Gardner’s (1983) theory of multiple intelligences, I maintain that ICT technologies for learning purposes allow learners to indulge in and make use of their favourite intelligence or a combination of intelligences in order to learn and communicate. According to Gardner (1983), each kind of intelligence is seen as a set of skills and abilities fairly independent of other human capacities. Humans rely on these skills and abilities to deal with everyday life. Gardner distinguishes seven forms of human intelligence: linguistic intelligence, logico-mathematical intelligence, musical intelligence, body-kinesthetic intelligence, spatial/visual intelligence, intra-personal intelligence and inter-personal intelligence. He maintains that all of us perceive the world in a different way since for cultural and personal reasons we give priority to different
intelligence(s) as we try to understand the world around us. Learners, therefore, using ICT for L2 learning purposes can resort to their favourite intelligence(s) and follow their preferred ways and means in learning, developing and using the L2. In light of Gardner’s theory of multiple intelligences, L2 learners’ engagement with new media is also in accord with current views that emphasize the need for diversified and individualized instruction at schools so as teachers can comply with the demands of more personalized learning input (cf. King-Shaver & Hunteruth, 2003).

Diversified instruction, therefore, with its emphasis on more personalized content, process, product and assessment, addresses better the requirements put forth in educational and professional spheres for more flexibility, creativity and critical appreciation in the classroom, which will allow all learners to flourish at their own time, space and pace since their needs and personal learning styles are taken into account. What’s more, diversified instruction is in concurrence with the experiential learning theory professed by Dewey (1933). In his seminal work, he maintains that learning is achieved by the interaction of ‘action vs. reflection’ and ‘experience vs. abstraction’ when contacts take place between human beings – individuals and groups – as well as the physical environment. The new media are by now one of the environments we, young and old, are constantly exposed to and where learning is enacted and re-enforced via exercising our individual learning styles (cf. Kolb & Kolb, 2009; Johnson, 2006; Papaefthymiou-Lytra, 2004, 2009). In this sense, new media can play a pivotal role in re-enforcing learning as a lifelong process as they can dissociate learning from strictly speaking classroom practices, teacher guidance and supervision, and prescribed curricula and engage learners with out-of-class activities for L2 learning at will. As I have stated in Papaefthymiou-Lytra (2004), due to the fact that access to new media by language learners cannot be easily restricted to useful sites only, it is up to teachers (and parents, for that reason) to help young learners and adolescents develop flexible critical inquiry learning attitudes as a prerequisite for the successful use of new media. Besides, it is the intellectual tools of inquiry that become the means by which we make experience educative. In my view, flexible critical inquiry learning attitudes will greatly enhance an individual’s personal will and initiative for learning. It goes without saying that a successful engagement of learners with new media for L2 learning depends on the learners’ ability and skill to make use of the new learning environment for their own purposes, which presupposes an ability to ask questions and make choices, hence, critical thinking.

After briefly presenting the L2 learning theoretical underpinnings that underline the pedagogical feasibility of new media and ELT, I will go on to discuss some of the psychological, socio-cultural and cognitive parameters that are entailed and enhanced by the use of the new media as educational tools for lifelong learning purposes.

2.2. Some important L2 learning parameters of new media pedagogies

In an attempt to make apparent what benefits learners gain from using new media for L2 lifelong learning, I will first discuss the psychological parameters; next, the socio-cultural parameters, and last, the cognitive parameters. All of these parameters act as resources and constraints for learners to develop lifelong L2 learning attitudes, skills, abilities and strategies. They comprise the long-term benefits derived from the utilization of ICT technologies and
constitute the learning conditions on which lifelong learning processes and practices for FL learning and development are built and sustained.

2.2.1. Psychological parameters

Learning languages is secured if language learners of all ages are adequately motivated to do so. The younger the learner the more the forces of intrinsic motivation should take over for effective language learning whether it is the L1 or any other L2 language. As I have argued in Papaefthymiou-Lytra (2011, p. 10), primary school ELT learners are activity motivated (see also Papaefthymiou-Lytra, 1998). They want to be actively involved in doing, discovering and constructing things in the classroom rather than passively receiving information delivered by the teacher, the teaching/learning material or other media used in the educational process. They love to play, move around, have fun with their classmates, explore the world around them and discover new, interesting and challenging ways for doing things. In this context, L2 learning becomes an alternative way for exploring the world with the help of classmates, teachers and the new media available. It is my contention that activity motivation in the context of new media pedagogies lies on and reinforces learners' intrinsic motivation since it satisfies their curiosity, inquisitiveness for new experiences and need for play and fun. Exploring the possibilities of new media for L2 learning purposes can become an interesting, fun and motivating experience in its own right.

In a similar vein, in Papaefthymiou-Lytra (2011, p. 10) I have argued that secondary school students are particularly motivated by a personal need to understand themselves, their relationships with others and the world around them. I have termed this type of motivation exploring thyself and the world at large motivation and it is firmly rooted on and further develops intrinsic motivation since it aims to gratify the learners' personal needs and interests in understanding themselves, as well as exploring, discovering, understanding and relating to others and the world at large. I suggest that the new media play an important role in unveiling the world to students and evoking emotions of fun, satisfaction and fulfillment among others to restless adolescents.

As far as young adults and adults are concerned, I would like to suggest that the instrumental motivation that usually characterizes their age range becomes durable if it is built on intrinsic motivation, in other words, if learners feel a personal need and fulfillment to pursue certain learning activities for professional training and development as well as for pleasure. I will thus claim that in all cases it is intrinsic motivation that is developed and sustained through new media pedagogies. The earlier the learners are exposed to using them for learning and fun purposes the more they will develop their intrinsic motivation over a life span. In the long-run, the knowledge and experience acquired are maintained as lifelong learning skills and abilities, processes and strategies.

Besides, new media allow learners to learn at their own time, space, pace, and mode which renders classrooms as one of the possible learning spaces available, the others being the home, community centres, public libraries and so on. Thus, learning material is available any time anywhere as educational tools whereas learners can choose the mode of learning particularly favoured by their own potential, needs, interests, wants and aspirations. In this way, learners
develop autonomy and independence from classroom-oriented curricula and teacher supervision, self-confidence in handling incoming information and navigating uncharted waters of knowledge while they become more flexible and adaptable in the learning strategies they employ through trial and error. Consequently, new technologies facilitate the modes of self-study, self-instruction and self-assessment. In doing so, learners take control and responsibility for their own learning. Autonomy and independence leads learner-centeredness a step further since learners are discouraged to adopt one approach to L2 learning for all (cf. Papaefthymiou-Lytra, 2004). By putting these learning practices into action learners’ self-esteem as successful L2 users increases since they rely on themselves and/or on their partners to solve problems when facing unpredictability in language in use rather than only on their teacher.

2.2.2. Socio-cultural parameters

New media involvement of learners for L2 learning purposes upholds collaboration and networking among learners within the classroom context as well as beyond the classroom and their country proper (cf. Vlachos and Papaefthymiou-Lytra, 2008). Learners are assigned to do tasks and projects in groups or pairs using the new media as sources of information and as means of communication (i.e. employing e-mail). This involvement increases an understanding among learners of the importance of using the L2 effectively for collaboration and networking, of becoming better organized and more responsible partners. Collaboration and networking help promote caring and sharing attitudes among team partners, demonstrate and develop good practices as well as leadership qualities in carrying out collaborative action — skills that are much appreciated in the professional circles of today’s globalised world!

What’s more, by undertaking tasks and projects with L2 learner groups from other countries, L2 learners further develop their multicultural understanding. I take multicultural understanding to mean awareness and understanding of the differences and similarities among language users’ L1 and L2 as well as among the languages and cultures that are part of the repertoires that class or team members bring with them in the act of learning and communicating. These languages and cultures may refer to L2 learners’ home language, or any other L3, L4 etc. in which they may have different competences. By becoming aware of differences and similarities among all languages and cultures present in the act of communicating, L2 learners further advance and refine their multicultural communicative competence, as I have argued in Papaefthymiou-Lytra, (2007a).  

Furthermore, new media employed as sources of information and as means of communication encourage learners to develop the skill of mediating across languages and cultures. Learners develop an understanding of otherness and difference in languages and cultures and try to explain differences and similarities as inherent in different cultures. They learn to talk about them, appreciate otherness and negotiate points of view and pieces of information they cannot comprehend. After all, L2 learning aims at developing learners’ abilities and skills to communicate effectively with others who come from different linguistic and cultural backgrounds as well as to deal with information that is derived from various cognitive and scientific fields including metalanguage and metacommunication both in the L1 and the L2.
2.2.3. Cognitive parameters

First of all, learners put in action their learning and communicating strategies as they try to comply with the demands of tasks or projects or keep the channels of communication open with their partners whether they are classmates, or they come from some other part of the world. Their contributions to respond to the task or project at hand are tailored to fit their maturity and their current knowledge and experience in the L1 and the L2. Each learner makes use of their personal intelligence orientation and learning style to achieve that end, while at the same time closely notices how others do similar things, meaning what intelligences and strategies they apply, if different from theirs, to achieve similar ends. For successful communication in the L2, content and strategy use should respect the learners’ age, cognitive, linguistic, social and emotional development (cf. Papaefthymiou-Lytra, 2009). Putting into action learning and communicating strategies really means making choices, trying out alternative solutions and making decisions about the most effective plans and/or routines to follow in order to respond to the demands of the task or project at hand (cf. Papaefthymiou-Lytra, 2009). However, decision making is based on reflection and critical awareness. Both promote learners’ conscious and critical analysis and understanding of the best ways and means to engage in order to handle learning and communicating successfully as an individual or as a member of a team.

In particular, as I claim in Papaefthymiou-Lytra, (2004), these ways and means refer, among others, to a) the conscious understanding of the role that such factors as personal or group aims, needs, objectives, interests, expectations, aspirations, etc. may play as learning and communicating facilitators in making appropriate choices to fulfill their purposes; b) the conscious understanding of the existing linguistic and cultural similarities and differences between the L1 and the L2 as well any other languages and cultures that are possibly involved either as the home language of some of the partners or as L3s, L4s and so on and their impact on communication and understanding, and c) the conscious knowledge and experience of where to find appropriate sources to accomplish the tasks or projects in hand and how to make the most of them. Thus, learners put cognitive and metacognitive processes in action for decision making concerning how to best comply with the rules, the functions and the demands set by the language(s), the culture(s), their partners, the expected outcomes for successfully carrying out a task or project in a joint effort with their classmates and others engaged therein.

It goes without saying that the patterns and plans derived from this kind of joint decision making become part of learners’ armory and they are eventually manipulated by learners for their personal aspirations and expectations as responsible individuals. As part of this decision making exercise, learners develop self-assessment practices and strategies that aim to evaluate the effectiveness of the choices they make during the various steps in carrying out tasks or projects jointly with others or on their own (cf. Papaefthymiou-Lytra, 2009). In this way, learners develop and exercise their ability in learning how to learn which leads to self-study, self-instruction and respective strategies. Through pair and group work they are trained to accept and learn from other-assessment by using communicating strategies successfully as I have argued in Papaefthymiou-Lytra, (1987). Learning how to learn constitutes the basic condition on which lifelong learning attitudes and practices can positively be built and attained while it can further increase learners’ flexibility and creativity in manipulating the L2 they have acquired so far for
learning and communicating purposes. The ability to handle unforeseeable situations successfully further boosts their self-confidence and self-esteem in successfully using the L2.

3. Pedagogical principles in new media pedagogies

For the successful application of new media pedagogies it is important that certain conditions and pedagogical principles apply in the classroom and the broader community if the skills and abilities attained in the context of new media pedagogies are to become permanent features of lifelong learning processes and practices.

The conditions refer to the availability of hardware commodities. Increasingly homes and individuals in Greece are equipped with new media commodities and anecdotal evidence suggests that even early years school learners are often quite versatile users of new media. Still, it is important that new media commodities should be available not only in schools, but also in other environments such as homes, local cultural centres and public libraries. Thus, they all become part of the broader interconnecting learning spaces available to learners where learning and communicating as well as collaborating among peers can take place. It goes without saying that their unavailability severely constraints the application of new media pedagogies.

Concerning the pedagogical principles, new media pedagogies draw on the *creativity* principle. In Papaefthymiou-Lytra (2011), I have argued that the creativity principle operates on the assumption that learners learn best if their learning styles and preferences are respected, they are allowed time, space and pace to learn, they combine L2 learning with fun and joyful activities that suit their cognitive, linguistic, social and emotional maturity. Fun and joy create positive feelings that are treasured for life. Such recent approaches to more individualized learning are differentiated instruction and blended learning. Differentiated instruction is a blend of whole-class, group and individual instruction for L2 learning, giving learners the necessary time and space to work and learn in accordance with their individual needs and wants, their learning style and personality characteristics (cf. Papaefthymiou-Lytra, 1998). Besides, differentiated contexts permit blended learning processes to become visible in the classroom. Blended learning encourages L2 learners to combine classroom work with online and ICT work which allows for better learner control over time, place, pace and pedagogical tools among others. Blended learning approaches such as CLIL (Content and Language Integrated Learning), for instance, permit learners to further develop good ICT literacy and skills. It is important to note also that both blended learning and differentiated instruction emphasize *alternative assessment*. In this way, learners develop an understanding that the L2 is learnt for lifelong use rather than for a short-sighted goal to have their L2 knowledge examined and certified as early as possible in their junior high school years. After all, L2 learners/users are expected to demonstrate good use of the L2 in adulthood (cf. Papaefthymiou-Lytra, 2012b).

The second principle that new media pedagogies emphasize is that of autonomy and independence for learners as well as learner responsibility for learning. All are attuned to the creativity principle highlighting learner-centredness, a flexible curriculum and lesson plans, open-ended task and CLIL orientated material, which allow for learner contribution in shaping the curriculum, the materials and the teaching/learning practices in collaboration with the teacher” (Papaefthymiou-Lytra, 2011, p. 4).
In this context, the teacher is expected to pay “close attention to learners’ own learning style, abilities, learning and communicating strategies, emotional needs, interests and purposes to name but a few factors that may differentiate learners albeit of the same age” (ibid. 5). It is only on these grounds that differentiated instruction can be effectively introduced in schools and new media can play a role in FL education where L2 learning is fun.

The third principle that new media pedagogies encourage is that of authentic communication. As mentioned in section 2.1, socio-constructivists maintain that learners construct knowledge through communicating with others so pair and group work become the vehicle for authentic communication in L2 learning. However, authentic communication is not always easy to take place among peers in the classroom since they have known each other as classmates for some time and there is not always much new information they can share among themselves. It is a make-believe situation rather than an authentic communication situation. In the case of the latter, there is always an element of unpredictability that puts to work discovery learning processes and communication action for problem-solving purposes among participants. In short, authentic communication emphasizes role making rather than role taking; process rather than product; discourse building rather than discourse performing; flexibility rather than rigidity in order for participants to attain certain prerequisites that will ensure successful communication. New media pedagogies, therefore, encourage teachers and learners to make extensive use of group and pair work with learners from other parts of the world via the Internet. Consequently, they promote language learning through actual use of the L2 and authentic communication since there is purpose in collaboration and networking, particularly with discourse communities outside the classroom proper. What’s more, reaching out to others via online interaction generates feelings that are not usually produced in the classroom environment. Inside the classroom collaboration often lacks the elements of surprise, challenge and the well-meant ‘shock’ of ‘otherness’. On the contrary, such feelings as enjoyment, fun, satisfaction, curiosity, surprise, suspense, challenge, and excitement are intensified if the collaborators come from different linguistic and cultural backgrounds. The more diverse their backgrounds are the more team partners can share.5

Besides, as L2 use is taken off the classroom proper and teacher immediate supervision into homes, libraries or culture centres, peers in groups or pairs are invited to make use of a different space in order to do the tasks and projects assigned to them, which can easier lead them to doing review work and/or remedial work on their own initiative. Through extensive reading, looking up for information to elaborate on desired content and/or to improve their linguistic expression, translating from L1 to L2 and vice versa, exercising other-assessment and self-assessment practices, group members collaborate with each other and reflect on their actions making necessary changes and adjustments as it suits them best. In order to manage their assignments outside the classroom proper learners engage in self-study and self-instruction practices as well as peer–teaching practices. Thus, individualized learning and instruction allow learners to work at their own pace, space and time in order to act in response to their wants and needs. According to Ellis & Sinclair (1989), learners can be trained to distinguish which strategies and practices can facilitate or can become an obstacle to their learning. Self-study and self-development greatly depend on the learners’ ability to make choices and to make use of the appropriate learning strategies, which will serve their purposes...
best, in other words, they greatly rely on ‘learning how to learn’ practices, which I consider as the fourth important principle of new pedagogies.

Next, new media pedagogies are built up on the principle that both typical and non-typical educational practices are equally important for L2 learning. Typical educational practices are primarily instigated by teachers and are usually based on the curriculum and the corresponding learning material. They can be considered as the starting point of the L2 learning process, particularly so in foreign language learning contexts where the L2 teachers are NN speakers of the L2. Non-typical educational practices can be activated by teachers too. Primarily, however, they are activated by the learners themselves as individuals or as members of a pair or group that strive hard to achieve their personal and pair or group goals. I consider typical and non-typical educational practices as an exemplification of the creativity principle in L2 learning. For the reader to understand typical and non-typical educational practices and their entanglement with L2 learning better, I will make a brief reference to the three forms of learning, namely, formal, non-formal and informal learning. Formal learning is “highly institutionalized, bureaucratic, curriculum driven, and formally recognized with grades, diplomas, or certificates” (Merriam, Caffarella, and Baumgartner, 2007, p. 29). A striking example of formal learning is compulsory schooling or tertiary education. Non-formal learning describes “organized learning outside of the formal education system. These offerings tend to be short-term, voluntary, and have few if any prerequisites. However, they typically have a curriculum and often a facilitator” (Merriam, Caffarella, and Baumgartner, 2007, p. 30). Examples of non-formal learning include community/local library literacy programmes, programmes developed by volunteer organizations, non-credit adult education courses, professional conferences, continuing professional development and so on. In non-formal learning contexts, the learners’ objectives may be to increase skills and knowledge, as well as to experience the emotional rewards associated with pleasurable incidents. In the context of the present paper, non-formal learning becomes a component of formal contexts when concepts, content and practices are adapted to the unique needs of individual learners. In the context of ELT, I will include differentiated instruction, special programmes for remedial or review work, reading or listening for pleasure, and so on, which are either suggested by teachers for the benefit of the learners or are taken up by the learners themselves. Thus, I claim that non-formal learning is often instigated by intrinsic motivation in the L2 learning classroom.

As far as informal learning is concerned, it takes place outside educational establishments and occurs in a variety of places, such as at home, community centers, sports grounds, places of work and recreation, etc. and through daily interactions and shared relationships among members of society. Informal learning is incidental, problem-related, with reference to the management of a specific situation. Striking examples include language acquisition, child socialization, attainment of cultural norms and manners in society. Informal learning is itself a lifelong ongoing process and it is primarily problem-related. In the context of ELT, informal learning can take place incidentally when learners surf the internet, read for pleasure or talk to foreign visitors among others. Following Björnaváld (2001), who maintains that all forms of learning are present and ought to be acknowledged in the context of vocational training, I argue that the three forms of learning, namely, formal, non-formal and informal learning are combined to form an integral part of education and the backbone of lifelong learning processes and practices.
In terms of the scope of the present paper, I consider typical educational practices as developing formal learning and non-typical educational practices as developing non-formal and informal learning. However, educational practices like projects where groups across countries are involved can integrate both typical and non-typical educational practices. The ultimate aim of school, I argue, should be to integrate all forms of learning in order to help learners develop lifelong learning skills and abilities for L2 use. This is so because with the advance of new media language learners are exposed to unrestricted and non-graded L2 language input. By doing so, I maintain, FL learners follow their own pace and method in FL learning as they try to satisfy, on the one hand, their wishes, wants and needs and, on the other, their curiosity, imagination, pleasure and creativity prowess. All these factors increase their intrinsic motivation for L2 learning and use, which is very often restricted and downgraded by the compulsory content and method of the pre-selected curriculum, that claim to cater for all learners who are attending a particular class. Besides, as stated, new media use for L2 learning across borders encourages learners to develop cross-linguistic and cultural mediation skills. These are the skills which allow learners to take into account a) their interlocutors’ cultural and linguistic backgrounds and b) the specific context of communication in order that they can select the appropriate linguistic codes that will facilitate them in transferring texts and information from their native language into the target one in an effective way. (Vlachos & Papaefthymiou-Lytra, 2008, p. 68)

Practices of this kind increase L2 learners’ multilingual and multicultural awareness as well as their multicultural communicative competence thus amplifying positive attitudes towards multilingualism and multiculturalism among learner participants in transnational collaborative teams.

4. The role of the teacher in new media pedagogies

In these new learning contexts, the roles and functions of the teachers reflect the broader concept of learner-centeredness which lies at the heart of new media pedagogies. Teachers should become aware that their ultimate aim is to facilitate learners to learn the L2 for lifelong purposes. Thus, the important question is not what teachers teach but what, how and why learners learn and how long it takes them to learn. Consequently, in my view, L2 teachers should function as advisors, counselors, organizers and facilitators of learning environments for learners. What’s more, they should function as collaborators and co-investigators in discovering learning with their learners, thus functioning as lifelong learners themselves. Last but not least, as new media pedagogies rely on differentiated instruction, teachers need to function as their learners’ alternative assessment assessors but above all as competent L2 users and interlocutors. It is my belief that an awareness and understanding of these roles and functions will make language teachers more conducive to lifelong learning practices for their own L2 language maintenance and professional development.

As advisors, teachers are expected to advise learners what, how and why they should work with specific ‘learning material’ such as extra-curricular readers, magazines, grammar books, watch certain programmes, etc. and where to look up for them. It is important for learners to understand that knowledge is not equated with the content of a designated book(s) and the role of schooling is not for learners to cover designated book content in order to get a certificate as
early as possible, but to develop skills and abilities for lifelong use. Teachers, therefore, need to advice and encourage learners to become involved in typical and non-typical educational practices of the formal, non-formal and informal type of learning described in section 3.

As counselors, teachers are expected to encourage learners to actively engage with the use of new media and overcome any inhibitions or fears they may have for studying outside the realm of the teachers’ supervision and the classroom proper. To successfully overcome these inhibitions and fears, teachers need to be understanding and open-minded, challenging and supportive, concerned and caring so that they confer confidence in learners to want to reach their true potential and realize their aspirations (cf. Papaefthymiou-Lytra, 2012a).

As organizers and facilitators of learning environments, teachers need to understand how typical and non-typical educational practices operate, what their learning benefits and constraints are for learners and consciously accept them both as equally trustworthy for L2 learning and educational purposes. They should promote all forms of learning making use of and encouraging appropriate educational practices that correspond to learners learning styles and abilities, learning and communicating strategies, cognitive, linguistic, social and emotional maturity as well as their interests and needs to name but a few factors (cf. Papaefthymiou-Lytra, 2011). They need to recognize that one approach does not suit all learners.

It is common knowledge that new media are developing at an amazing pace. It is important to acknowledge that it is difficult for all teachers to keep up with these developments; however, experience indicates that school learners, in particular, are quick to catch up with new media developments and use of them since they learn from other learning environments besides schools, i.e. home, local libraries, magazines, books, friends as well as classmates among others. As a result, teachers should accept learners to demonstrate to them how new media work and be willing to learn from them. Besides learners surfing the internet to do their collaborative tasks and projects can discover new content and new expressions in the L2. Teachers should be keen to learn from their learners’ discoveries thus enhancing their own L2 learning. Therefore, teachers as collaborators and co-investigators should be eager to unearth new knowledge alongside their learners or learn from their learners’ discoveries shedding off authoritarian attitudes and fears of the sort that ‘I am the teacher, I should know everything in advance’ or ‘my students should not discover my lack of knowledge’ and so on. These attitudes and fears signify that teachers cannot discharge themselves of thoughts and ideologies of the sort of ‘one approach for all students in the classroom’ or ‘one book for all’. As a result, they employ teacher-centred practices because they feel they cannot handle matters otherwise. By accepting the functions of collaborators and co-investigators alongside their learners, teachers can further develop and strengthen constructive lifelong learning attitudes thus growing into lifelong learners themselves.

As argued, by definition new media pedagogies embrace differentiated instruction as they seek to utilize formal, non-formal and informal learning as legitimate forms of learning in order to develop lifelong learning habits. One more important role teachers are invited to play in the FL classroom is that of alternative assessment assessors. Suffice it to say that teachers need to embrace alternative assessment as the main evaluation mode for L2 learning. Of course, this is possible if teachers, learners and parents alike realize that learners attend school and learn
foreign languages at school for lifelong use rather than for certification. Testing for certification that can be a useful qualification for work purposes should be left to adults. L2 teachers should believe and convey to learners and their parents that L2 learning is fun and a lifelong learning process. The longer we are exposed to the L2 the more appropriate the L2 we use will be in accordance with our age, interests and purposes in adult life. If L2 learning is equated with certification, it distorts and downgrades the real aims and objectives of the teachers’ work and function in the classroom. Unfortunately, ideologies and practices of this kind do not give credit to teachers’ and learners’ long-term interests.

A final but equally important function, L2 teachers are expected to play in the FL classroom is that of competent L2 user and interlocutor. As I have argued elsewhere (cf. Papaefthymiou-Lytra, 2007, 2001, 1998, 1990, 1982), L2 teachers are the only live users of the L2 in the foreign language classroom and the only person who can demonstrate to learners how the L2 works for communication purposes, what adjustments need to be made on the spot to improve interaction either as speakers or listeners because of multicultural or other L2 linguistic or content difficulties and problems encountered in the process of communication, written or oral. In other words, how learning and communication strategies operate in the act of carrying out a successful interaction with others (cf. Papaefthymiou-Lytra, 1987). In this sense, the competent L2 user and interlocutor teacher who maintains and develops his/her L2 level of competence becomes the model L2 user for L2 learners.7

5. Concluding remarks

Traditionally, L2 learning pedagogies tend to consider learners and teachers as two distinctive entities placing teachers who function primarily as facilitators for learners’ learning the L2 in a superior position. By placing an emphasis on the principle that we ‘learn a foreign language(s) for lifelong use’, new media pedagogies, however, have contributed to changing this way of thinking. New media bring to life new environments for learning, recreation and work, which are accessible to both learners and teachers alike. New media pedagogies emphasize that L2 learners are meant to learn L2 languages for lifelong use. They are expected to know how to bridge gaps of knowledge and expertise and how to maintain their FL skills for lifelong use. Similarly, FL NN teachers are encouraged to keep improving their professional skills and their L2 use as a lifelong practice. In new media pedagogies, both learners and teachers are at the heart of the learning process. Learning how to learn is as important for learners as is for teachers. Figure 1 illustrates how L2 learning theoretical underpinnings, important parameters for L2 learning, pedagogical practices for L2 learning/teaching that evolve around typical and non-typical educational practices, teachers’ roles and functions as argued in this paper influence and interact with each other to fulfill the ultimate aim of developing lifelong L2 learning processes and practices for learners and teachers alike.
Thus, teachers and learners are in the centre of new media pedagogies as co-efficient partners with roles and purposes that often complement each other’s. The formal, non-formal and informal forms of learning constantly interact with each other providing L2 learners with new learning opportunities. As I have argued in this paper, new media pedagogies for L2 learning and development form the basis on which L2 learners learn how to adjust themselves to the unending demands of L2 language use in real time as a lifelong process and make use of their own resources and capacities as knowledge and experience. Use of new media facilitates learners in their search for knowledge and experience outside the classroom proper. It is this understanding that nourishes lifelong learning processes and practices as a lifelong endowment. For, in my view, new media not only influence L2 learners who are expected to take more responsibility for their own learning as a lifelong process but also teachers and teachers-to-be who are expected to become more proactive to learning and self-development for personal and professional reasons.

As I have also argued, these technological changes demand new roles for FL NN teachers if they are to respond well to the new conditions. Teachers need to understand that L2 learning and teacher education are not completed because a certificate or a degree has been acquired. If they are to maintain their L2 linguistic and multicultural communicative competences, teachers need to keep practicing and developing them. Besides, FL NN teachers need to update and evaluate their own performance in class if they are to maintain good professional standards in the context of new media pedagogies. New media pedagogies with an equal emphasis on typical and non-typical educational practices can be of an immense help to all interested and forward-looking teachers. The development of such attitudes alongside extensive use of new media will have a profound effect on teacher training and teacher development introducing into the game typical as well as non-typical teacher training practices and enhancing teacher responsibility as a lifelong L2 learner and a professional. With regard to typical pre-service teacher training practices, a proposal with a cross-cultural, cross-linguistic angle, in the context of formal learning, was made in Papaefthymiou-Lytra (2001). The aim of the proposal was to develop pre-service teachers’ awareness and flexibility of pedagogical implications as well as multicultural
understanding. The proposal illustrated how the use of the new media could allow teacher-trainees in ELT to build discourse communities across languages, cultures and countries, where they could observe, reflect and discuss how ELT teachers from other linguistic and cultural environments operated in the EFL classroom. Concerning non-typical teacher training practices, an illustrative example of teacher development in the context of non-formal learning is described in Karagianni (2012) as well as in this volume. In her doctoral research, Karagianni discussed how four practicing teachers in the Greek educational context benefited professionally from their online collaboration in discussing about their own and their learners’ performance in the classroom, airing problems, difficulties, different viewpoints, mindsets and arguments. Karagianni demonstrated through on-line collaboration, teacher professional development can become a voluntary, self-fulfilling, self-developing exercise with a strong peer supporting engagement.

One last point to consider refers to the ICT relevance and application in the school curriculum, in particular. Here, Bax’s (2003) categorization of the use of CALL in the classroom can be very useful. Bax argues that the use of CALL in the language classroom over time can be described as follows: Restricted, Open and Integrated CALL. Restricted CALL refers to teachers occasionally using CALL, such as for learners to do some grammar exercises. Open CALL refers to teachers using CALL for a wide range of activities and tasks such as when the learners do reading comprehension tasks, writing assignments, etc. Integrated CALL refers to teachers’ fully integrating technology in the learning/teaching process so that it becomes almost ‘invisible’ as a new commodity in the classroom. Bax argues that he has opted for these terms for they reflect different approaches to theories of learning, software use, activities, teachers’ roles, etc. He claims that the most of the uses of CALL in the language classrooms fall within the Restricted and Open CALL boundaries with the Open CALL gaining ground. However, he argues school practices should aim at Integrated CALL thus reaching what he calls the ‘normalisation’ stage. Following Bax’s argument, I maintain that new media pedagogies, aim at integrating technology in L2 learning/teaching for lifelong use as I do not envisage the use of new media for L2 learning and development in the classroom environment only. After all, the benefits derived from ICT literacy, L2 lifelong learning and development as well as multilingualism and multiculturalism, in the context of new media pedagogies, can be sustained in adult life. They can be utilized among others for further job-oriented L2 language learning where L2 learners as adults can be engaged in typical and non-typical practices of job training and retraining including uses of the L2 in new professional contexts.

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**Notes**

1. ICT technologies have been readily adopted and adapted by the methodologies of distant and open learning, particularly for tertiary education programmes. For an interesting discussion on relevant issues, see the article “Online learning will make college cheaper. It will also make it better.” by L. Rafael Relf, President of MIT, in TIME Magazine, 7 October, 2013.

2. For definitions and examples of typical and non-typical education practices, see section 3.
3. English, being a lingua franca, has developed in different varieties. All are to be found on the Internet.
4. In the Greek educational context, the diversity of linguistic and cultural resources in multi-cultural classrooms can be utilized for the development of L2 learners’ multicultural communicative competence. See Fay, Lytra and Ntavaliagkou (2010) for a very interesting discussion and suggestions regarding how to promote multicultural understanding and multicultural competence through ELT in the Greek multicultural classroom. In a similar vein, European projects such as COMENIUS can offer an immense help towards the direction of developing L2 learners’ multicultural communicative competence, mediating across languages and cultures and the European dimension. See Vlachos (2006), where primary schools from various European countries, namely, Finland, Greece and Spain, are implicated; also Calogerakou & Vlachos (2011) where secondary schools from Greece and Italy are involved. Further discussion of these topics is beyond the scope of the present paper.
5. The interested reader is referred to the European Centre for Modern Languages of the Council of Europe publication: Framework of reference for pluralistic approaches to languages and cultures. (2007) Graz, Austria, for a discussion of the issues of reaching out to other languages and cultures as well as relevant learning/teaching and assessment practices (http://carap.ecml.at/Portals/11/documents/C4pub2007E_20080302_FINAL.pdf).
7. The level of L2 linguistic and communicative competence that FL NN teachers should attain and maintain is an important aspect of FL NN teacher education and teacher development, as I have argued (in Papaefthymiou-Lytra 1998, 2007b, 2011, 2012a, among others), that requires more in-depth research. See also Yiotis, G. (Ph.D. thesis in progress).

References


Yiotis, G. (Ph.D. thesis in progress). From university to Workplace: Investigating EFL Teachers’ Concerns and Beliefs during teaching practice and in their first year of teaching. Faculty of English Language and Literature, University of Athens, Athens, Greece.

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Technology in action for language education and research at the Faculty of English, University of Athens

An interview with Professor Bessie Dendrinos

In the past decade, the rapid growth of information and communication technologies (ICT) has had a substantial impact on all aspects of language teaching and learning. In Greece, ICT has been making its way in primary and secondary education, especially in the past 5 or 6 years, and this has called for changes in how information is transmitted and acquired—changes which have involved teachers and learners. Issues regarding the use of ICT in education have drawn the attention of policy decision makers, teacher trainers, high stakes examination specialists, university instructors and researchers. Bessie Dendrinos, who is Professor of Sociology of Language and Foreign Language Education at the University of Athens, has been very closely involved in all of the above, mainly in her role as director of the Research Centre for Language Teaching, Testing and Assessment (RCeL) of the Faculty of English Language and Literature. In the interview that follows, she provides readers with her insights as to the ways in which new technologies have been used creatively to facilitate the work being done at the 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), pre-service teacher education programme at the Faculty of English, and other major projects that the Centre is carrying out. The interview was conducted by Nicos Sifakis, RPLTL Editor-in-chief, in January 2014.

Την τελευταία δεκαετία, η ταχεία ανάπτυξη των Τεχνολογιών της Πληροφορίας και της Επικοινωνίας (ΤΠΕ) έχει σημαντικό αντίκτυπο σε όλες τις πτυχές της διδασκαλίας και της εκμάθησης γλωσσών. Στην Ελλάδα οι ΤΠΕ έχουν ενταχθεί στη μαθησιακή διαδικασία τόσο στην πρωτοβάθμια όσο και στη δευτεροβάθμια εκπαίδευση, ως διευθυντή του Κέντρου Έρευνας για τη διδασκαλία γλώσσων και πιστοποίησης κυρίως κατά τα τελευταία 5 ή 6 χρόνια. Αυτό έχει επιφέρει αλλαγές στον τρόπο με τον οποίο οι πληροφορίες διαδιδόμενες—αλλαγές που αφορούν εκπαιδευτικούς και μαθητές. Τα θέματα που σχετίζονται με τη χρήση των ΤΠΕ στην εκπαίδευση έχουν απασχολήσει σοβαρά τους φορείς λήψης πολιτικών αποφάσεων, ακαδημαϊκούς, ερευνητές και γενικότερα τον εκπαιδευτικό κόσμο. Η Βασιλική Δενδρίνου, καθηγήτρια της Κοινωνιολογίας της Πλωσάς και της Εκπαιδευτικής Εκπαίδευσης στο Πανεπιστήμιο Αθηνών, έχει συμμετάσχει σε μεγάλο βαθμό στα παραπάνω, κυρίως ως διευθύντρια του Κέντρου Έρευνας για τη διδασκαλία γλώσσων, δοκιμής και αξιολόγησης (RCeL) του Τμήματος Αγγλικής Γλώσσας και Φιλολογίας. Στη συνέντευξη που ακολουθεί, η Δενδρίνου παρέχει στους αναγνώστες πληροφορίες για τους τρόπους με τους οποίους οι νέες τεχνολογίες έχουν χρησιμοποιηθεί δημιουργικά για να διευκολύνουν το έργο που επιτελείται στο RCeL και πιο συγκεκριμένα για την έρευνα και την ανάπτυξη της εξέτασης της ελληνικής
Nicos Sifakis (NS): To what extent have ICT and the social media impacted the provision of better quality of education for the students of the English Department of Athens University?

Bessie Dendrinos (BD): I’m not sure that I can answer this question; that is, to claim that the quality of education we are offering is somehow better because of the use of ICT. While we all know that new technologies have definitely affected education in general, we are still trying to discover what types of impact it has had, and whether it has contributed to offering education that is somehow ‘better’... As to answering your question about ICT improving the quality of education...

NS: Difficult to say, right?

BD: Right. Since education is an extremely complex system, embedded in a political, sociocultural and economic context, any serious attempt to define ‘quality’ in the context of education requires systematic study of several interrelated issues and such studies are scarce. Besides, the hundreds of definitions about what ‘quality’ in the context of education means, testifies to the complexity and multifaceted nature of the concept. I think it would be safer for me to say that the introduction of ICT in the educational landscape has played a major role in changing it. By using ICT, we are changing the ways and places of accessing educational material and we are altering the conditions of learning. We know this for a fact—not only from research, but from our own experiences. We are witnesses on a daily basis to the changes occurring in the way that information circulates, and the ways in which it is shared; we observe changes in the way that teaching and learning transpires; we note how the role of the teacher and the textbook has changed, since their authority has been challenged by the digital media. As a matter of fact, before the ICT era, our basic task as learner, teacher, or researcher was (to seek ways) to access information. Now, there’s so much information readily available that our job is to read through all sorts of multimodal texts quickly, recognize what is of value to us for our particular purposes and what is not, and then figure out how we can use it. In other words, we are being provoked to think differently—perhaps more creatively, as we have become designers in meaning-making processes (selecting and using various available resources to make our own meanings).

In foreign language education that has to do with English in particular, the availability of resources is greater than in any other language. Those that read English have at least double the amount of information and the number of communication tools than anyone else. Not that we are making the most of this. ICT are not being exploited to the extent that they could be in our schools and universities in Greece and this is because digital literacy is still low in our country as it is in a few other Member States. At the University of Athens, in the Faculty of English Language and Literature, we are still at the dawn of an ICT era and cannot compare ourselves with universities in many other economically developed countries which have
making extremely valuable use of digital technologies at all levels of education. Actually, we are just now beginning to see how technology can best assist us to achieve our educational goals. And, I am sure that ICT will play a major role in our work in the near future in Greece and in Europe as a whole, since the European Commission is calling for a coherent ICT strategy at EU level to address the scope, size and complexity of the challenges in support of actions of the Member States and the entire chain of stakeholders. As a matter of fact, the DG of Education and Culture of the European Commission has stated that the use of ICT and the Open Educational Resources for learning are key aspects of the ‘Rethinking Education Strategy 2014-2020’ it has proposed. In its recent Communication, the Commission discusses the important opportunities that digital revolution brings for education:

Technology offers unprecedented opportunities to improve quality, access and equity in education and training. It is a key lever for more effective learning and to reducing barriers to education, in particular social barriers. Individuals can learn anywhere, at any time, following flexible and individualised pathways. Digital learning and recent trends in Open Educational Resources (OER) are enabling fundamental changes in the education world, expanding the educational offer beyond its traditional formats and borders. New ways of learning, characterised by personalisation, engagement, use of digital media, collaboration, bottom-up practices and where the learner or teacher is a creator of learning content are emerging, facilitated by the exponential growth in OER available via the internet. Europe should exploit the potential of OER much more than is currently the case.

We, at the University of Athens, still have a way to go before we move away from exclusive use of traditional formats and engage ourselves in making optimum use of the digital media. We have made our first timid steps by using the e-class platform that our institution (and other Greek universities) have made available to us.

**NS:** Is it obligatory for each instructor to have an e-class?

**BD:** No. But, the platform supports 4,448 courses at our university, 124,848 users instructors and students). The Faculty of English teaching staff has developed more than 100 courses using the platform. To be exact, 112 instructors have their own e-class. Some of them, who are less ardent ICT patrons, use their e-class minimally but they do nevertheless.

**NS:** You mean they upload handouts, reading materials, etc., but have not changed their way of teaching in any way...

**BD:** Exactly. Not that this is a minor issue, because by uploading materials we... save on paper. Some of us have even made our published books available online for free, and save money for the state. Others are using it very creatively, especially those who are digital enthusiasts. Some of us are entering the world of our university’s ‘open e-class’ platform. And those of us who have the support of technical staff because of funded projects are starting to offer courses online. One such course will be offered in the framework of our Faculty’s MA programme in Applied Linguistics. Designed by Dr Bessie Mitsikopoulou (Director of the Self-Access Learning and Materials Development Centre (SAL) of our Faculty, Dr Kia Karavas (Assistant Director of the RCeL) and myself, this is a collaborative e-course which makes use of e-learning techniques and distance-learning practices. But you already know about this course, Dr Sifakis, since you will be taking part in it, along with the three of us, and with colleagues from the Aristotle University of Thessaloniki. Another e-course is currently being offered this year for the first
time too. It is addressed to undergraduate students doing the TEFL Practicum, in the context of our pre-service teacher training programme. Our associate, Dr Maria Stathopoulou, has used ICT and e-learning techniques to design a specialist workshop on mediation techniques and our students are responding enthusiastically to the online guided instruction.

**NS:** Would you say that the different ways of using ICT have contributed to enhanced learning in the non-formal and in-formal educational contexts more than in the formal educational institutions? To what extent are the informal and non-formal educational frameworks more suitable for adopting ICT than state schools and universities which are more statutory?

**BD:** I think that formal educational institutions resist change. Schools and universities, whose role is to reproduce dominant ideologies and uphold the status quo, resist change due to the complexity of their institutionalized intertwined social relationships. Even the society as a whole is generally not open to change—I am referring to Greece in particular. And why should we be? Education at school and university does not train us to be open to new ways of thinking and doing, it does not teach us to be flexible, to question constructively, perhaps because while we are in the midst of a post-structural era, we still cling onto a long-gone values of Classical Humanism, where knowledge is considered a set of truths to be mastered by students (Dendrinos 1992, pp. 101-107). It’s not the place or the time to discuss this significant issue, but I do believe wholeheartedly that we do need to bring about change to education and that ICT and digital technology will facilitate it, though it will again be up to us to manage the change in a socially meaningful manner. The change will not regard education only but research, where it is already making a tremendous impact.

**NS:** Opening up more possibilities, access to everything that is published.

**BD:** Not only because it offers access to resources, but because technology allows us to investigate areas that we could not investigate before. Take, for example, the knowledge we have developed about the human brain. We knew so little about it a few years ago, when there was no technology to help us investigate how the brain operates. And, of course, the findings in one field are used in others, helping them develop and pose new questions that can be answered again by using ICT. For example, advances in neuroscience about how the human brain works have led to important research findings regarding education – how people learn.

**NS:** Definitely, new technologies have opened up so many possibilities...

**BD:** That’s right. They have certainly opened new opportunities for us at the RCeL. We are trying to make as extensive use as possible of ICT in our research projects.

**NS:** Where do you get funding for your projects?

**BD:** So far, our projects have been funded through the European Social Fund and the Greek state, but we also fund them ourselves—those of us who work for the RCeL and the SAL Centre. I am referring especially to Dr Karavas and Dr Mitsikopoulou. We all put in a lot of hours and our expertise, with no extra wages, to manage and train the junior staff of the Centres: about 40 mostly young researchers. Among them are people who have specialized in informatics, digital technologies and e-learning techniques, whom we were able to hire on a short term basis, so as to carry out our research projects. Their working with us marked the beginning of our path into a new kind of knowledge.

**NS:** Your path to the digital age, you mean?
BD: Yes, and much more. In collaborating with people who are not in language studies but work with the technological aspects of information and communication, people who process information and engineer information systems that store, process, access and communicate information, we have learnt a lot. And so have they, of course. We have been able to use our expertise for mutually beneficial accomplishments. The same is true when we work with the computational linguist and statisticians on our team. We have been learning from each other since we began working together, upon receiving funding for research related to the KPG exams. It was 2007 when we began storing and processing all of our work files in electronic data bases and repositories, from which we can now easily access a great amount of information very quickly. We also began engineering our own systems and electronic tools, and we created the KPG English Corpus, which now contains about 3.8 million words from scripts produced by Greek learners of English (candidates in the KPG exams). The script collections have been systematized in an electronic Script Database, which is being enriched on an ongoing basis, maintaining a balance across proficiency levels, types of tasks which candidates are asked to perform as well as communicative contexts in which they use English. The KPG Corpus is an important resource for a small project team, coordinated by Dr Voula Gotsoulia, investigating the linguistic ‘profile’ of the Greek learner of foreign languages —at the moment only in terms of English. The interim aim of the research team is to systematically analyse data drawn from the KPG Corpus so that the results of our analysis will help us document descriptors of linguistic and communicative performance at different levels of language proficiency. In other words, the findings from the analysis will be used so as to produce detailed descriptors, specifying how learners articulate socially purposeful meanings at each proficiency level. The methodology employed for script analysis rests on a theory of language use in context and looks at the interrelated features pertaining to distinct levels of linguistic analysis (lexical, semantic, grammatical/morpho-syntactic, and functional).

NS: Does this Corpus belong to the RCeL and is the ‘Profile’ an RCeL project?

BD: Yes, it does and it is. Though the Greek FL Learner Linguistic Profile is not a funded project per se at the moment, it has been possible for us to continue our work, thanks to the data we have collected on account of our essential involvement in the KPG exams in English—exams which we prepare and then analyse for their validity a priori and a posteriori. The Greek Learner Profile and the KPG Corpus are actually the reason we are members of the SLATE network, a European-wide research network brought together through a common interest in second / foreign language development, levels of language proficiency, and language testing research. They are also the motive for joint projects with other European partners. Of course, data from the KPG Corpus are made available conditionally to young researchers doing their postgraduate studies in Greece and the UK.

NS: When are we likely to see findings from this project?

BD: It’s an ongoing project which will continue for as long as we have resources available. Some of our relevant work has been published (Gotsoulia & Dendrinos 2011) and findings are likely to appear in our RCeL publications site, as well as in other international journals. What’s also important is that the KPG Corpus analysis work we have been doing links onto and supports other relevant projects. For example, the resulting descriptors referred to above are being linked with the Can Do statements articulated in the Integrated Foreign Languages Curriculum (IFLC) as well as with the KPG descriptors, aligned to those of the Common European Framework of Reference (CEFR, 2001). The IFLC which I just mentioned is another project that we have taken on at the RCeL, with no outside funding, as an extension of a
project organized and executed by the Greek Ministry of Education, in which I was invited to take part as project team director, assuming the responsibility of developing a new school curriculum for foreign languages. The curriculum was indeed developed within the time frame that the Ministry gave us. It was a multilingual curriculum, that has since been theorized, but which still needs background research. I was interested in working towards validating the curriculum’s leveled descriptors and brought the RCeL into the picture. With a view to validating the descriptors, our task was to work further on the KPG Corpus and provide criterial features characterizing the communicative performance associated with each proficiency level. We responded to this goal by adding grammatical, lexical, textual and other details to the functional descriptors. The documentation of the IFLC required that the project team go back to language data from different languages so as to formulate precise descriptions of distinct competences in each language. These descriptions were then aligned to validate the initial, cross-language, leveled descriptors and, subsequently, linked in a system of comparable linguistic features which can form standards for relating teaching, testing and assessment in more than one foreign language and can be explicitly and unambiguously incorporated to educational practice. As described by Dendrinos and Gotsoulia (2014), in order to handle the amount of information we were obtaining, we developed a multilingual database containing detailed descriptions of elements approximating the linguistic and communicative competences across foreign languages included in the Greek school curriculum, i.e., English, French, German, Italian and Spanish. The IFLC database is organized in terms of the six-level scale of language proficiency and included a series of components corresponding to one type of language competence (i.e., the functional, grammatical, lexical, and discourse competence). Naturally, if we had not developed an electronic data base, this job would not have been completed.

**NS:** These contributions make RCeL a unique Centre in Greece, and perhaps beyond Greece. Would you like to give us some more information on the projects carried out by Centre?

**BD:** The Centre was resourced both in terms of technical and human resources back in 2004-2005. It began as a Centre for Research in English but it has grown to support research in other languages, in language education and language education policy. To this end, we have developed a website bringing together policies and recommendations of the European Commission regarding multilingualism, with findings and proposals regarding Greek educational language policy. For issues related to language education, language policies and practices in the EU, we have been collaborating with other European organizations and projects. One of the exciting projects we took part in data analysis and interpretation of findings from the ‘European Survey of Language Competence’ (a unique pan-European project providing us with empirical, comparable data on young European’s language proficiency and on various contextual factors) related to Greece. A second stimulating project that we took part in is ‘Language Rich Europe’ (a networking project which brought together 1200 policy makers and practitioners from 24 countries and regions in Europe to discuss and develop better policies and practices for multilingualism).

**NS:** And what about the research linked to the KPG exams?

**BD:** A lot of our work at RCeL is around the KPG exams and the ongoing subprojects around them. The research questions we have been raising and the loads of data we have available have fed onto several MA dissertations and very successful PhD theses. Innovative research has been produced on the representations that source texts used in KPG exams and other exam batteries create, on the text and reader variables that affect intelligibility of reading.
comprehension texts, on interlinguistic mediation and translanguaging. Original research is also being carried out on examiner interventions when testing speaking, on factors contributing to difficulty in listening comprehension and read-to write test tasks, on the literacy requirements of reading comprehension test tasks with multimodal source texts ad on other issues. The project work related to the exams in English is still our primary responsibility at the Research Centre, especially now that some of us responsible for the KPG examination suite are involved in its digitalization.

**NS: KPG going digital? What aspects of it? Are digital resource materials for candidates being prepared?**

**BD: Yes, but not only.** The electronic age for the KPG exams is here in various ways. For one thing, the two universities involved in preparing the Greek national foreign language exams for the KPG (the University of Athens and the University of Thessaloniki) are now collaborating with the Computer Technology Institute of the University of Patras (ITYE-Diofantos) to build a multilingual platform which will administer computer adaptive tests in all the KPG languages to certify from A1 level to C2 level proficiency in English, French, German, Italian, Spanish and Turkish. We are developing a software prototype based not on Item Response Theory, as most Computer Adaptive Language Tests (CALT), but on Task Based Theory. This application is being designed to estimate the level of proficiency in each of the six KPG languages that will, as of 2014, be tested electronically.

**NS: Does this mean that students will be able to sit for these exams from their home?**

**BD: First let me say that KPG candidates are not necessarily school students though a big segment of our population is made up of students.** But there are many adults taking the exams too, given the fact that the certificate, issued by the Greek Ministry of Education, has face validity in Greece and recognition here and abroad. Secondly, let me make clear that candidates cannot sit for the exam at home. They will have to go to examination centres, where they can use especially equipped computer terminals, and where trained staff will be available to supervise and facilitate the test administration procedure. Actually, we are planning to hold the first round of our e-exams during this calendar year. But, it will be a trial run, held in only three large urban areas: Athens, Thessaloniki and Patras.

**NS: So, when can one register for them?**

**BD: The e-exams will be announced as soon as we are ready for our trial run.** Building the information systems and tools that support a multilingual examination platform, operating to test all communicative competences—not just reading and listening comprehension as most tests of this type do—is no easy matter. In fact, it is exceptionally challenging to develop a CALT for six languages. There is little to no experience with multilingual platforms equipped to handle exams in more than one language. All the CALTs I know are for a single language and they are used for purposes other testing proficiency for certification, i.e., they are used to diagnose, place and/or assess progress in language learning.

**NS: So, why did you decide to give up the pen-and-paper version?**

**BD: We have not decided to stop running the paper-based version.** We will continue administering it, at least as long as it is in demand by our candidates, alongside the e-KPG exams. However, we do believe that in the not too distant future people who will have
become more computer literate will prefer the electronic over the traditional format. And of course, there are several advantages to CALT.

NS: Such as?

BD: It is thought to provide greater standardization of test administration conditions and there is certainly greater flexibility in scheduling test administrations with it. CALT is by definition sensitive to the proficiency level of the candidate. Moreover, computers record multiple aspects of the candidate’s test-taking behaviour, they are much more accurate at scoring test responses than human beings are, and more accurate at reporting scores.

NS: Does this mean that both closed-response and open-response test items will be computer scored?

BD: Only the reading and listening comprehension test-task items will be computer scored. Speaking and writing test tasks, which are also computer administered, will not be scored by the computer. Candidates’ communicative performance in writing and written mediation, speaking and oral mediation will be scored by human raters.

NS: How will these raters be trained to evaluate reliably?

BD: Even though we are considering automated essay- and speech-scoring for the future, especially for English, in which a lot of relevant research has been carried out, at the moment we feel safe with the group of trained professionals that we have evaluating speech and writing production. We will feel even better when we have a small select group of human raters centrally evaluating the essays and the oral performance of candidates that come to us in digital form. Of course, training will continue for those taking part in both the paper-based and the computer-based tests. But, whereas up to now the core KPG team for each language trained its examiners and script raters during face-to-face seminars, we will soon be facilitated in our job through the e-training platform we (the two universities in collaboration with the Computer Technology Institute of Patras) are developing.

NS: Will this e-training be open to anyone interested?

BD: No. It is intended for those who have been selected by the KPG language teams to examine and evaluate speech and writing in each language, and have been included in the relevant Registry of the Ministry of Education. We are preparing a series of e-courses for the professional development of language-specific KPG examiners and script raters, but the platform will also offer webinars for specific purposes. Though it is costly to prepare the technology for all this, it saves the state, the examiners and the examiner trainers time and money needed for travel and accommodation.

NS: It’s a really good idea to make such use of digital technology.

BD: We are very pleased with the development of the e-training platform for the preparation of KPG examiners and script raters which, actually, is one the components of an e-school that we are building.

NS: An e-school?


**BD:** That’s right. An online prep school, first of all for school students and other prospective candidates that would like to prepare for the KPG exams, by way of electronic tutoring and self-instruction techniques. The ‘Student Class’ is only one of four that the KPG e-school contains.\(^{14}\) The other three are: a ‘Teacher Class’ (for teachers interested in preparing students who are in school, private tuition or language school classes to sit for the exam), a ‘Parent Class’ (providing information about the KPG exams – information that we think parents who are wondering about which examination suite to choose for their kids need to know. Of course, the last of the four classes is the KPG ‘Assessor Class’. It’s the class that links on to the e-training platform.

**NS:** It’s interesting because RCeL and the SAL Centre deal with so many different projects that manage to merge expertise from so many domains.

**BD:** That’s true. And the more we become involved in such a wide range of language education projects the more we realize how important it is to work in a cross-disciplinary manner. A good example is the development of digital materials for the Greek state EFL textbooks (Mitsikopoulou 2014), in the context of the Digital School Project of the Greek Ministry of Education that Bessie Mitsikopoulou, Director of the SAL Centre coordinated with a group of experienced EFL materials developers, e-learning experts and computer engineers. Over the last three years this group developed a unique expertise with the production of state-of-the art applications for foreign language teaching. Their work which is presented in an article in this special issue is outstanding. It has also enriched our experience with electronic materials development.

**NS:** I am sure that cross- and inter-disciplinarity has been most important and rewarding for all of you working at the two Centres you have developed at the Faculty of English of the UoA. Now, would you say that the thread that ties these projects together is the effort to make optimal use of new technologies?

**BD:** No, what ties these projects together is their overt concern with foreign language education in a manner which makes sense and follows international research trends and directives or recommendations of the European Commission, but which is suitable for the local context. What I have often characterized as ‘glocal’ foreign language teaching and testing is one of the major issues for us at the two Centres. I have spoken and written about the glocal character of the KPG examinations and the advantages of such a multilingual suite over the monolingual international English proficiency testing (Dendrinos 2012, 2013a). I have also written about the work we did to create English for Young Learners materials which are context sensitive (Dendrinos 2014a).

**NS:** Are you now referring to the PEAP project, through which English has been introduced in primary school to first, second and third year pupils? Is this project still operant?

**BD:** Well, the funding is soon ending, but all of us who have become involved in this fascinating project\(^ {15}\) have made every effort to make the programme for young learners as a whole sustainable and the products we created useful for all stakeholders (Dendrinos 2014b). As part of the PEAP project,\(^ {16}\) briefly described in a recent print and online publication (Dendrinos 2013b), which was executed at the request of the Ministry of Education, we have carried out several surveys to learn more about the context in which the courses we developed for young Greek learners were introduced, and to find out about the stakeholders: the PEAP pupils, teachers and parents. Actually, as we are focusing today on the use of ICT in our projects and
ensuing research, I must mention the fact that we have been using digital questionnaires to be answered online and this has helped us greatly because this way we were able to store, manage and process all the data we collect from a large number of respondents. The ordeal is infinitely easier than when we had to process data from pen-and-paper questionnaires alone. The results of our surveys and other studies carried out during this project can be worked out in a small period of time. With regard to the results from the PEAP surveys, we studied and interpret them on several occasions. The findings are presently being published in volume to appear soon in printed form, in Greek (Dendrinos, 2013c) and also in the PEAP portal which has been a life-line for the whole programme.17 The PEAP parents’ attitudes to the course have also been discussed in detail by Karavas (2014a).

**NS:** In what sense was the PEAP portal a ‘life-line’ as you call it?

**BD:** We began designing the PEAP course and the teaching-learning materials to be used for instruction in the first two grades of primary school in the early part of the summer in 2010 but we were obliged to start implementing the course only three months later, during the school year 2010-11, on a pilot basis, to 800 schools around the country, in the context of a larger project the Ministry had planned to execute. It had decided to experiment with the operation of an “all-day” primary school programme, with an extended school curriculum that would offer pupils just starting school not only English as a foreign language, but also a course to develop their computer skills and their art education. The time was so incredibly short that had we not resorted to creating a website (with a primitive at the beginning social networking technology, supporting repositories for materials, newscasts, and much more), it would have been impossible for us18 to implement PEAP at such short notice. It would have been unfeasible to sensitize over than 2000 teachers all over Greece about the goals and nature of the course, to introduce them to how children learn, and to acquaint them with methods used for early language learning and teaching. These first steps we took to educating specialist teachers who had neither the training, nor the experience to teach very young learners were crucial. We resorted to using digital materials that could also be accessed by EFL school advisors who were willing to collaborate with PEAP team and acted as multipliers. Most importantly we created a platform which could be visited via the website, on which we stored easily accessible teaching-learning materials for teachers to download for their classes: visual materials and very detailed guidelines about how to use them for teaching purposes, audios, links through which they could access songs, rhymes and stories for young EFL learners. As it was the first time that teachers were obliged to use the computer to get their job done, there were mixed feelings about this. Three years later, in 2013, the course series *Alpha English* (for the first grade) and *Beta English* (for the second grade) is already in schools. So are the *Magic Book* series for beginner and ‘advanced’ third graders that is loved by teachers and pupils. The third grade course, by the way, was not scheduled to be in the project until the second year of PEAP implementation, and that too was a spur of the moment decision of the Ministry, which involved the PEAP team and the colleagues to whom I assigned the writing and design of the pilot version of the *Magic Book* in a strenuous situation. The efforts of Thomai Alexiou and Marina Mattheoudaki, on the professorial staff of the School of English, University of Thessaloniki, who have extensive knowledge and experience in EYL proved very successful and they too uploaded material to be used by specialist teachers teaching third grade pupils in all schools of the country. Providing it to the teachers in a digital form, during the first year that the material was used in school, served a very important purpose: that of piloting the material and receiving feedback from teachers, pupils and parents, before it was finalized. This had also been the case with the materials for the pupils of the first two grades.
NS: How did teachers react the first years when they didn’t have a textbook in hand and had to download digital materials?

BD: Some of them complained severely but there were teachers that really enjoyed the fact that they could do alternative work and that they were participating in creating materials appropriate for Greek young pupils of English.

NS: That’s great. I am really pleasantly surprised, because, in my experience, teachers fear the lack of a textbook. They want a textbook. Not just the teachers, the parents, the learners.

BD: You’re right. That’s always true. Actually, as I already mentioned, we had to produce a print version of our digital materials (which are still on the PEAP portal), but it was less because of the fear of the lack of textbook. A lot of the materials, especially worksheets, had to be downloaded and reproduced by the teachers in schools which lack of money for Xeroxing today. Nevertheless, this process helped some teachers become more textbook independent and creative. Or so our surveys show. They take materials from the portal and adapt them to their own classroom needs.

NS: So, the portal has served its purpose, right?

BD: It most certainly has, and we hope that it will prove to be a support to teachers and teacher-trainers even when the project has been completed and there is no longer funding for it. I mention teacher training here because among the many other innovative services that the PEAP portal provides (e.g., The Teacher’s Corner the Parent’s Corner and the PE@P journal), it hosts an impressive teacher-training website with a brilliant online teacher-training course (Karavas 2013). This e-course, created by Karavas, consists of 6 self-contained modules focusing on how young learners think and learn as well as on the use of tasks, materials and techniques appropriate for teaching pupils of this age group. Also, it includes a wonderful online platform entitled 2gather, the purpose of which is to help primary school teachers form Communities of Practice. The need for the development of such communities was highlighted in a survey investigating the impact of the PEAP training programme on teachers’ practices and beliefs (Karavas & Papadopoulou, in press).

NS: That’s really impressive. Is the PEAP course going to be expanded to include all primary schools? It’s obviously a successful programme, with positive feedback as far as I know.

BD: It’s true that the programme has been successful, despite the constraints we had to face, and some of the factors that led to its success are discussed by Karavas (2014b). We have even managed to convince those opposed to introducing English so early in school that it is an enjoyable learning experience for children—so long of course as the teacher does the job she is supposed to. I say this because I must admit that there are some teachers who do a terrible job of teaching young children. Of course, many of these teachers would do a bad job no matter whom they were teaching—they are weary and burnt out in teaching conditions that are less than ideal. There are others that would do a better job if they were teaching older pupils or high school students. However, they don’t have a choice. In any case, whether or not the “all-day” school programme and not just the PEAP course will or will not be extended to all primary schools does not depend on its quality. The fact that PEAP has done well is reflected in that the number of 800 schools that implemented the course in 2010 grew to 1300 schools in 2013 in the midst of Greece’s economic crisis. Ultimately, however, whether or not the course
will be extended to all schools in Greece depends on the money secured by the Ministry of Education for this.

**NS:** It all boils down to money, doesn’t it?

**BD:** Money but also ‘meraki’—a word that can’t really be translated into English, right? Translating it as ‘passion’ doesn’t cut it, does it?

**NS:** How right you are. And how lucky we are to have so many teachers with the enthusiasm needed to do fantastic work in their classes.

**BD:** Yes, work however for which they are never rewarded —compensated (not necessarily with money) for doing wonderful things and reprimanded or provided with guidance when they get it wrong.

**NS:** That’s very true and this is such a serious issue that we could talk about it for hours. I’m afraid however we must stop this interesting interview. It’s provided us with so much already. I wish to thank you very much.

**BD:** Thank you Dr Sifakis. It has been a pleasure and a privilege to speak with you.

**Notes**

1. According to the Education and Training Monitor 2012, 9 out of 23 EU Member States are still lagging behind in their computer skills. Over 50% of 16-74 year olds have no or low computer skills. While the use of ICT in education and training has been high on the policy agenda, says the Commission, critical elements are not in place to enable digital learning and OER to be mainstreamed across all education and training sectors.
7. This is how we have translated the Ενιαίο Πρόγραμμα Σπουδών των Ξένων Γλωσσών (ΕΠΣ-ΞΓ), a new curriculum for languages in the Greek school which was drafted in 2011, piloted 2011-13 and is now being completed for implementation as 2014-15 ([http://rcel.enl.uoa.gr/xenesglosses/](http://rcel.enl.uoa.gr/xenesglosses/)).
16. In Greek ΠΕΑΠ stands for «Πρόγραμма Εκμάθησης Αγγλικής στην Πρώιμη Παιδική Ηλικία» translated as Programme of English Language Learning at a Young Age.
18. It is important to define the 'us' because had it not been for education devotees who plunged in without hesitation and worked selflessly with the RCEl people all through the hot summer, before the project was guaranteed to the University of Athens or funded, the PEAP project would not have evolved. The dedication of the EFL teachers and teacher trainers I am referring to (in alphabetical order) included in those first stages Amalia Baloudi, Melina Barabouti, Maria Bouzouki, Alexia Giannakopoulou, Evangelia Karagianni, Katerina Nikolaki, Dora Simsa, Clary Varela-Kosovitsa, Fofou Veneti, and Kaiti Zouganelli. Many of them remained part of the larger group that became the PEAP team includes too many people to mention here.

References


Materials design for the digital enrichment of the Greek EFL textbooks

Σχεδιασμός εκπαιδευτικού υλικού για τον ψηφιακό εμπλουτισμό των εγχειριδίων αγγλικής

Bessie MITSIKOPULOU

This paper 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. The first part of the paper presents the principled approach to enrichment that was developed for the production of digital materials while the second part analyzes the different types of digital materials that were produced, following Tomlinson’s (2003) categorization of EFL materials. The paper suggests that digital enrichment should include a variety of teaching materials in order to cover various aspects of the EFL curriculum, to offer EFL teachers a variety of tools and applications to enrich their teaching methodology, and to enhance EFL learners’ experience with the textbook, taking into account varying learning styles and needs.

Key words: materials design, EFL digital materials, digital enrichment, informative materials, instructional materials, experiential materials, exploratory materials
1. Introduction

The Digital School project is a large scale project which aims to promote ICTs and to develop a digital culture in Greek schools. Funded by the Greek state and the European Union and implemented by the Computer Technology Institute and Press, it includes a number of actions, such as the development of an open access educational platform; the digitization of all textbooks used in Greek primary and junior high schools; the digital enrichment of Greek textbooks with multimedia materials; the collection of available digital resources (e.g., photos, audio and written texts, videos, digital educational materials) from various sources such as the Educational TV, the National Audiovisual Archives, Libraries and Museums; and the development of a national repository of learning objects for primary and secondary education (Figure 1). This paper focuses on the design and implementation of the digital materials developed to enrich the Greek State EFL textbooks and it argues that the digital enrichment of EFL textbooks should be multi-faceted, covering different aspects of the EFL curriculum and taking into account both teachers’ and learners’ perspectives. The paper starts by presenting the rationale, the principles and the criteria followed by the English Group and then moves to the different types of digital materials elaborating on Tomlinson’s (2003) categorization of ELT materials. It should be clarified that the perspective adopted in this paper is that of the materials designers aiming to explicate the principles and the employed procedures used for the development of digital EFL enrichment materials.

In discussing the role of digital enrichment materials in EFL textbooks, we should keep in mind two key features. First, most of these materials may be used on their own, but their primary function is to complement an existing textbook and its associated curriculum. This feature affects considerably, as we shall see below, decisions taken concerning the type and the extent of the produced digital materials. Second, the EFL textbooks we are presently dealing with are not textbooks that have been originally designed to function in an online context but they are digitized forms of textbooks that were designed for the print mode.

Figure 1: The homepage of the Digital School Project (www.dschool.edu.gr).
The digitization of these textbooks has followed a number of stages. Initially, the .pdf form of the books was turned into .html form. In this way, each chapter of a textbook was turned into a website, a canvas upon which additional interactive materials could then be added through hyperlinks. Eventually, the enriched textbook – consisting of the digitized textbook and the digital materials that have been added to enrich it – was made available through an open access platform which provides open access to all digital textbooks and materials.

In the context of the Digital School Project, the English Language Group worked systematically from February 2011 to April 2014 in order to develop digital enrichment for five EFL textbooks for junior high school (the Think Teen! series for 1st Junior High Beginners and Advanced, 2nd Junior High for Beginners and Advanced and 3rd Junior High) and four textbooks for primary school (grades 3 to 6). The Group consisted of 14 members, including nine highly qualified teachers of English with extensive experience in EFL materials development and ICT training, two e-learning experts, two computer engineers, and the author of this paper as the coordinator. In order for these specialists from different disciplines to work efficiently together, it was important from the beginning of the project to build a form of group solidarity, to explore the expertise and potential of each group member, to establish a common understanding of the notion of digital enrichment, and to develop a set of principles and criteria for the enrichment of EFL textbooks.

2. The notion of enrichment

Educational researchers have variously defined enrichment as acceleration or curriculum compaction for gifted students only (Clendening & Davies, 1983); as opportunities for personal and social development for all students, giving greater fulfilment and intellectual satisfaction than the basic curriculum (Piggott, 2004); or as a set of techniques that can be used flexibly for students’ educational needs (Feng, 2005). Despite its different meanings as enhancement, refinement, upgrading or augmentation, enrichment has always been viewed as an add-on quality, something attached to something else (e.g. a curriculum or a textbook).

The notion of enrichment in foreign language teaching is recorded as early as 1939 when Vera Peacock first talked about “enriching a basic textbook along broadly cultural lines” (Peacock, 1939, p. 24). Although at the time Peacock referred to realia, such as maps, photographs, posters, newspapers and magazines, she identified a number of enrichment principles which are of significance even today and which may be relevant to other types of enrichment, such as the digital one, discussed in this paper. According to these principles, enrichment should not develop into ends in themselves, but it should be kept ‘subservient’ to the aims of the textbook; it should not overload an already crowded syllabus; it should be taught, not simply presented to students; it should establish some kind of connection with students’ lives; and it should be related to a specific textbook each time, not be decided definitely for all situations (Peacock, 1939, pp. 24-29).

In more recent accounts, enrichment in ELT has often been conceived in terms of materials adaptation (Richards, 1999; 2001). Various forms of this adaptation include:

- Adding materials to address specific needs (e.g. an examination requirement).
- Extending materials to provide additional practice for a specific aspect of a textbook or to provide opportunities for more personalized practice.
• Modifying materials to give them an additional or an alternative focus in order to address the needs of a particular group of students (e.g. because of their age, gender, occupation, social or cultural background).
• Localizing materials (by adapting or supplementing them) to make them relevant to a specific target group.

From the above it becomes clear that regardless of the different forms it may take, enrichment refers to a quality that cannot stand on its own, but that it requires the existence of what it qualifies, in our case, the EFL textbooks. However, as Feng (2005) argues, how we define enrichment will have significant implications for the issues related to it: for whom enrichment is meant and why, where and when enrichment should take place, which parts of the curriculum should be enriched and how students could benefit from it. In order to take informed decisions about these issues, we developed a principled approach to enrichment which is briefly outlined below.

3. Principles for the digital enrichment of EFL textbooks

Problematising the notion of enrichment, the first step of the English Group was to come to an understanding of the notion of digital enrichment in EFL textbooks and to define the concept within the context of our work. This proved quite a challenging task, since it is a practically unexplored territory in related literature. During the first year of the project, we developed a number of principles upon which we based our materials development approach. Although they were later refined in the second and third year of the project, these principles have actually guided our work from the very beginning. According to this principled approach,

• digital enrichment should be systematic, targeted with specific aims, and running throughout the book (principle 1).

In this way, we wanted to exclude the danger of attempting incidental enrichment in different parts of a textbook. Systematic enrichment also meant that both EFL learners and teachers would be familiar with the types of enrichment found in the textbook and in this way, as they progress through the chapters, they would know what to expect and how to use the enrichment material. Second,

• an analysis of the digital textbook should precede any decisions made for the type and extent of digital enrichment (principle 2)

A routine was established for the preparatory stages of enrichment: the first step involved analysis of the students’ book (for the overall structure of each chapter), the teachers’ book (for the employed teaching philosophy and the pedagogical approach) and the workbook (for the scale and amount of offered activities) by group members. The second step included meetings with the authors of the books to get their insight both on the difficulties they encountered during the production of the book (e.g. constraints imposed by the Ministry of Education and/or by the publishers, copyright issues, etc.) and their suggestions for digital enrichment. The next step involved discussions with EFL teachers who used the specific textbook in the classroom and interviews with EFL learners. Next a list of possible types of enrichment was prepared. From the above, it becomes clear that
• enrichment should not follow the same design for all textbooks (principle 3)

but the analysis conducted by group members each time should bring to the foreground the types of enrichment that would be appropriate for each textbook. For instance, some textbooks were found to be quite dense with a lot of materials in each unit, long texts and challenging vocabulary. Digital enrichment in these cases would focus on illustrating existing features of the textbooks, not adding new content to already dense textbooks. Most importantly, it must be pointed out that

• the nature of the intervention should be supportive of the textbook not subversive of textbook philosophy. (principle 4)

In other words, the employed approach and the spirit of the digital enrichment is a positive one, not a corrective one trying to “fix” possible problems of a textbook or “improve” its teaching philosophy. Most importantly, during the preparation stages the different types of enrichment prepared by our group were piloted in Greek EFL classrooms. Important feedback from this piloting resulted in changes and improvements of the produced materials. In addition, whenever possible, attention was paid to

• deliver the produced resources in different forms for multiple use (principle 5)

and in this way to offer teachers the flexibility to select from a range of different forms the one that would best fit their particular educational aims each time. Finally, taking into account that

• digital enrichment is a multidisciplinary project which requires the cooperation of different specializations (principle 6)

group members were asked to collaborate in order to develop digital learning objects for all chapters of the textbook in a similar way. This ensured that during the project, all members had equal opportunities to be engaged in different types of digital materials and to develop similar pedagogical and technological expertise.

In what follows, discussion focuses on the pedagogical design of the digital materials along the lines of the categorization attempted by Tomlinson (2003). Different types of digital enrichment are presented together with specific examples.

4. Pedagogical design of digital EFL materials

Reporting on earlier studies, Tomlinson (2012) suggests that during the production of EFL materials, developers rely mostly on previous materials which have worked for them, on successful publications or on their creative inspiration, but they do not generally rely on a principled framework or criteria. The situation becomes even messier since we move from the writing of EFL materials to be delivered through the print mode to the designing of multimedia materials to be delivered digitally. Materials developers in this case have to take into account the complex ways in which the various semiotic modes will be combined, as well as the role and pedagogical aim of each semiotic mode in the final product.
During the three years of materials development, as a group we faced a number of challenges related to the above issues and we went through a number of phases of development. For instance, in the first year of the project we started with more modest productions, whereas later in the second and third year we experimented and explored more complex and demanding applications in terms of both content and multimedia design. Consequently, in the enrichment of the EFL textbooks we followed a recursive route: after completing the first phase of enrichment, the following year we would go back to it with new ideas for additional enrichment types and applications.

Looking back critically over our work with some kind of self-reflection, we have come to the realization that our produced materials may be categorized according to the types of educational materials that are identified by Tomlinson (2003). This categorization involves the following types:

- Informative materials, informing the learner about the target language
  e.g. glossaries, picture dictionaries, grammar comics, infographics and audio extracts
- Instructional materials, guiding the learner in practising the language
  e.g. edugames, reading and listening apps, self-assessment tests
- Experiential materials, providing the learner with experience of the language in use
  e.g. digital stories, virtual tours and interactive maps
- Exploratory materials, helping the learner to make discoveries about the language
  e.g. a Mystery and a Lost series, English Quests and writing apps

Considering that instructional and informative materials are the two most extensively used in the language classroom (Richards, 2001, p. 251), it is not surprising that in the first year of our work we primarily focused on the development of instructional digital materials. Later, as we progressed and became more confident, we started exploring new territories, experimenting with other types of software and types of materials. Table 1 provides an overview of the different types of digital enrichment materials developed for the Greek state EFL textbooks along the lines of the four categories of materials described above.

<table>
<thead>
<tr>
<th>AIMS</th>
<th>INFORMATIVE</th>
<th>INSTRUCTIONAL</th>
<th>EXPERIENTIAL</th>
<th>EXPLORATORY</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRIMARY</td>
<td>Inform learners about language</td>
<td>Guide learners in practising the language</td>
<td>Provide exposure to language use, facilitate personal engagement</td>
<td>Help learners make discoveries about language</td>
</tr>
<tr>
<td>SCHOOL</td>
<td>Audio extracts</td>
<td>Edugames</td>
<td>Digital stories</td>
<td>Mystery and Lost series</td>
</tr>
<tr>
<td></td>
<td>Picture dictionaries</td>
<td>Self-assessment tests</td>
<td>Virtual tours</td>
<td>English quests</td>
</tr>
<tr>
<td></td>
<td>Grammar comics</td>
<td>Reading apps</td>
<td>Interactive maps</td>
<td>Writing apps</td>
</tr>
<tr>
<td>JUNIOR</td>
<td>Audio extracts</td>
<td>Edugames</td>
<td>Digital stories</td>
<td>Mystery and Lost series</td>
</tr>
<tr>
<td>HIGH SCHOOL</td>
<td>Glossaries</td>
<td>Self-assessment tests</td>
<td>Virtual tours</td>
<td>English quests</td>
</tr>
<tr>
<td></td>
<td>Infographics</td>
<td>Listening apps</td>
<td>Interactive maps</td>
<td>Writing apps</td>
</tr>
</tbody>
</table>

Table 1: Types of digital enrichment materials for the EFL textbooks.
4.1 Informative materials

The aim of these materials, as their name indicates, is to inform EFL students about different aspects of the target language. A number of applications developed to enrich the Greek state EFL textbooks for both primary and junior high school fall within this category. Most of these applications were developed during the initial phase of textbook enrichment while some others were later additions. Informative materials include glossaries and picture dictionaries for vocabulary building, grammar comics and infographics for introducing specific lexicogrammatical features, and audio extracts for listening comprehension activities.

4.1.1 Audio extracts

When the Think Teen! series textbooks were produced a few years ago, the audio extracts for listening comprehension activities were not recorded, so our group gave a priority to this type of enrichment. The recordings took place in a professional studio under the guidance of experienced members of our group. A number of native and non-native speakers of different ages participated as speakers in the recordings. Next, the recordings were placed on the html of the textbook next to the instructions of each listening activity (Figure 2). In this way, they were made available for handy use in the classroom through the use of an interactive board, or for self-study, since learners could be listening to these extracts on their own from their home computer. All recordings used in a textbook were also made available together in a folder through the main menu of the textbook for teachers who would like to have them stored in a CD-ROM, USB stick or other digital medium to use them in a classroom with no internet connection.

![Audio recordings on the html of the EFL textbook next to listening comprehension activities.](image)

4.1.2 Glossaries

Glossaries were prepared for all five Think Teen! series textbooks, ranging between 600 to 2,000 terms each. Since their purpose has been to function as enrichment to a specific lesson in the textbook, and not as a general purpose lexicon, glossaries include only the meanings found in the specific texts. Every term in the glossaries includes a number of required fields (a code number for unit and lesson, the term, its definition and an example) and optional fields (synonyms, antonyms and related words). A number of technical solutions were considered and it was finally decided to use the glossary option of the open source platform. A primary consideration during the production of the glossaries was the delivery of this useful material in different ways to allow various views of the content: EFL
learners and teachers may search a glossary in different ways (all of it, alphabetically, per unit or per lesson) depending on their needs. Glossaries may be accessed online through the html of the digital textbook at the beginning of each lesson (Figures 3-4). They may also be accessed in an interactive pdf form that can be downloaded and printed through the main menu of the digital textbook (Figures 5-6).

4.1.3 Picture dictionaries

While glossaries were produced for the Think Teen! series, picture dictionaries were prepared for the 4th, 5th and 6th grade EFL textbooks in order to illustrate new vocabulary items. Taking into account that the same themes appeared in different textbooks, it was decided to organize the picture dictionaries in terms of themes, not in terms of textbook units or lessons. Most importantly, organizing the picture dictionaries thematically has allowed their use in different parts of the same digital textbook or in different textbooks.

Initially, considerable time was spent by group members to identify the main themes and the words to be included in each one of them. Thirty themes (e.g. animals, climate, clothes, food, hobbies, jobs, musical instruments, school, etc.) were identified and a number of words that could be visually illustrated were selected. These words were then grouped into sub-themes so that they could be presented together in a contextual way. For instance, each
one of the slides in the picture dictionary on household chores presents a different room of the house and the things that need to be done in each one of them (Figures 7-8). Overall, EFL learners have the opportunity to see a picture of a word included in the picture dictionary, check its spelling, and listen to its pronunciation. In addition, whenever possible picture dictionaries are also enriched with meaningful animations, graphical representations, music and songs (e.g. a halloween song introduces the halloween picture dictionary).

Figures 7-8: Screenshots from the household chores picture dictionary.

4.1.4 Grammar comics

Comic strips and cartoons are considered powerful teaching tools especially for primary school EFL learners, according to Graham (2011), allowing the narration of a complete story in a few images, through easily identifiable characters – who form the basis for the sketches – and short dialogues. Comics have been found to create an environment that is conducive to learning, enhances reading skills and adds humour in the language classroom (Kew & White, 2009; Liu, 2004; Ujiie & Krashen, 1996). In the context of the Digital School project, grammar comics were prepared for the 6th grade EFL textbook, whose aim was to illustrate a grammatical feature in a contextual way. A storyline was first prepared by content developers and next the comic strips were designed using freeware software. The theme of each comic strip is loosely related to the theme of the lesson for which it has been prepared. Consequently, these grammar comics can also be used as stand-alone multimodal materials. For instance, the following extract is from a comic strip entitled ‘interviewing a star’ which aims to exemplify the use of Present Perfect tense. Learners are exposed to how a particular grammatical feature is used in practice through a scenario-based comic.
4.1.5 Infographics

Although infographics were initially used to present dense statistical information, today the term refers to any visual representation presenting some kind of information which can be difficult to read as a written text, but which can be quickly accessible when transformed to a visual text. Infographics have been found to be quite useful in the teaching of English because they convey a lot of information using few words, they are much easier to read and remember, and they build on learners’ visual literacy. They use colourful graphics with circles, lines, triangles, etc., and brief, easy to remember text. They can be used as posters in the classroom to illustrate, for instance, a particular grammatical feature (e.g. co-ordinating conjunctions), new vocabulary (e.g. idioms about money or easily confused adjectives), punctuation rules (e.g. how to use semi-colon), or a writing technique (e.g. point of view in a narrative). Infographics were developed by the English Group in order to illustrate different aspects of the EFL textbooks (Figure 10). Their aim is to represent visually useful information that EFL students will need to remember.
4.2 Instructional materials

According to Richards (1999, p. 50) “effective instructional materials in language teaching are based on theoretically sound learning principles, are appropriate to the learners’ needs, provide examples of how language is used, and provide opportunities for communicative and authentic language use”. Together with informative materials, instructional materials are the ones mostly used in the English classroom. Their aim is to guide the learner in practising the language. The types of instructional materials that were produced include edugames, self-assessment tests, reading and listening apps.

4.2.1 Edugames

Games have been found to facilitate language learning, whether these may be games involving physical movement (Tomlinson & Masuhara, 2009) or online games (Henry, 2013; Liang, 2011; Turgut & Irgin, 2009). Digital edugames have been prepared for all EFL digital textbooks that have been enriched with digital content. On average, six edugames were prepared for each textbook unit, with the main aim to offer practice in specific lexis and grammar presented in it. Ten flash-engines for well-known games and puzzles (e.g. crossword, hangman, anagram, matching, cloze text, sentence restructuring, and multiple choice) with a friendly interface were used. Particular attention was paid to the graphics of these edugames: illustrative graphics with simple lines were prepared for young teenagers (Figure 11), more colourful and appealing for 5th - 6th graders, and more playful for 3rd - 4th graders (Figure 12).

Humorous names were selected for the games in an attempt to attract young learners’ interest: for instance Wordmind (for hidden words), Blank Tank (for cloze text), Jumble Jungle (for jumble sentences in a paragraph), Go figure! (for jumble words in a sentence), Double Jeopardy (for multiple-choice with 2 possible choices) and Triple Jeopardy (for multiple-choice with 3 possible choices). The advantage of the specific flash-engines is that they allow the replay of the same game with different content. For instance, a crossword may have stored 50 words with their hints from a specific lesson (Figure 11). Every time that a student presses the ‘try again’ button, the flash engine randomly selects some words and their hints from the ones that have been saved in it and a new crossword with different words appears on the screen, allowing the EFL learners to play the same game several times and to consolidate the vocabulary found in a specific lesson. For visibility purposes, the
games are placed through hyperlinks at the beginning of each lesson, together with all other digital resources available for the specific lesson and they are indicated through specially prepared buttons (Figures 13-14).

Figures 11-12: A crossword for teenagers (left) and a matching edugame for 3rd-4th grade (right)

Figures 13-14: Digital edugames at the beginning of each lesson on the html version of the primary (left) and junior high school (right) textbooks

4.2.2 Self-assessment tests

One of our main considerations in the digital enrichment of the Greek EFL textbooks has been to make accessible the existing materials of the textbook and to foreground the rich materials they offer. In this case, revision tests from the teachers’ books, which, according to the conducted textbook analysis, were rarely used in the classroom due to lack of time, were transformed into online self-assessment tests to be used by learners. The free software Net Quiz Pro 4 was selected for this application. Quite surprisingly, this task proved to be more challenging in its implementation than initially thought, only to prove once more, that the move from the print genre (in this case the genre of test) to the online genre (the self-assessment test) is a complex procedure involving employment of different representation modes (Jewitt, 2002; Snyder, 1998). Specifically, the internet medium added unique properties to the online genre in terms of production, distribution and reception which have affected the genre itself and had to be taken into consideration (Askehave & Nielsen, 2005). Consequently, activities had to be redesigned for the new digital environment.
4.2.3 Listening apps

In our attempt to maximize the use of the offered resources, we used the recorded audio extracts for the listening comprehension activities in order to produce listening applications for additional practice. Fifty-nine such applications were developed for the Think Teen! series textbooks. Each one of these applications is based on a specific audio recording and the activities found in the book, with some additional activities where necessary. The applications consist of an introductory page resembling an online newspaper or a website (Figures 17-18), a number of listening comprehension tasks, the audio recording, its transcript and a glossary (when necessary). Learners may choose to listen to the recording through the embedded player as many times as they wish, or they may choose to read and listen to the audio extract at the same time.

4.2.4 Reading apps

Reading apps are interactive applications developed for 4th, 5th and 6th grade EFL textbooks and they are based on a reading text each time. They include a storyline and they are accompanied by activities that illustrate specific aspects of the texts. Their aim is to facilitate reading by supporting comprehension with graphics, visual materials and sound.
(Derewianka, 2003). Each reading app has its own unique structure which is outlined by content developers in a storyboard before it is transferred into its digital form. This variety in structure may be seen as a feature that will trigger learners’ curiosity and motivation, since they are encountered with a different type of application every time they use one. Generally, the first part of a reading app application presents a reading text in a visual way, also supported by an audio text, while the second part of an application includes reading comprehension activities of different kinds in the form of quizzes and puzzles to be solved.

![Figures 19-20: A reading text as it appears on the textbook (left) and a screenshot from the reading application prepared for it (right).](image)

### 4.3 Experiential materials

As Tomlinson (2003) indicates, experiential materials provide learners with experience of the language in use by facilitating personal engagement. The digital experiential materials that were prepared to enrich the EFL textbooks are based on visual and multimodal texts. They include virtual tours, interactive maps and digital stories. However, unlike the instructional materials presented in section 6, experiential materials do not include any language activities. They are meant to function as additional resources and it is left to EFL teachers to decide how they are going to be used in the classrooms.

#### 4.3.1 Virtual tours and interactive maps

Geographical information plays an important role in EFL textbooks. Learners are often asked to understand the notion of space, to communicate spatial concepts in English, to analyze spatial relationships in the target language, to learn about countries and culture, and about various places they have never visited. In our project we used Google Earth, the most popular technological map tool today, in an attempt to make spatial relationships more relevant to EFL learners (Patterson, 2007). After recording landmarks and locations which are included in the various activities in the Greek EFL textbooks, we prepared short videos for each one of them, using the tools offered by Google Earth. The prepared applications are movie-like short tours of cultural sites enriched with enhanced navigation, street view imagery and 360° panoramic views of selected landmarks (e.g. the statue of Liberty in New York, Taj Mahal in India, Pisa in Italy). The mapping of the area and the specific buildings make this virtual tour quite realistic for the viewers. The aim of these applications is to offer an additional resource allowing learners to ‘visit’ a specific location. For instance, after
learners have read a text about the Sydney Opera House in their textbook (Figure 21), they may watch a short virtual tour (Figure 22) in order to enhance their experience of the specific building.

In addition to virtual tours, interactive maps of different kinds were produced by group members. These are autonomous learning objects that also focus on geographical landmarks presented in the EFL textbooks, as the one presented below on India (Figures 23-24). Their aim is to offer rich, cultural experience to EFL learners. A variety of texts are used in these applications. These include picture galleries, short videos, short written texts with useful information, and maps of different kinds enriched with hot spots containing pictures, audio or written text.

4.3.2 Digital stories

Digital stories have become very popular with web 2.0 technologies in language education (Alexander & Levine, 2008; Ohler, 2005). In some educational contexts, students are asked to produce their own short video clip where they combine images, text, recorded audio narration, music and video in order to present information on a specific topic or to narrate a story from their own viewpoint, most often in first person narrative (Robin, 2008). The
digital stories produced as enrichment resources by our group members are visualizations of reading texts in video form. A dramatization of the reading texts is achieved through the integration of several semiotic resources such as the audio recording, verbal cues or subtitles, music, sound effects, still and moving images. The aim of this type of digital enrichment is to familiarize EFL learners with some demanding texts, not to function as reading comprehension materials (such as the reading apps), and for this reason, digital stories are not accompanied by comprehension activities or quizzes. The selected texts which have been turned into digital stories may be about an important person (hero or character stories), stories about specific events (accomplishment or adventure stories), personal stories (e.g. about family celebrations), narratives (short stories, myths and folk tales), biographies and documentaries. Through this dramatization of the reading texts, EFL learners are exposed to multimodal texts which allow them to ‘see’ and ‘listen’ to these texts, enhancing in this way their understanding.

![Figures 25-26: A text on the Wright Brothers as it appears on the EFL textbook (left) has been turned into a digital story (right)](image)

**4.4 Exploratory materials**

Exploratory materials have a more focused orientation than experiential materials, in that they aim to help learners make discoveries about the language. They have been the most demanding and complex to produce digital materials both in terms of content and multimedia design. These include the ‘mystery’ and ‘lost’ series applications, English quests and writing apps. The first two involve learners in some kind of problem solving through a scenario-based problem to be solved (in the case of the ‘mystery’ and ‘lost’ series) or through a project-based task (in English quests). The writing applications guide learners through modeling and scaffolding to explore a writing genre.

**4.4.1 ‘Mystery’ and ‘Lost’ series**

A type of exploratory digital materials produced by our group involves learners in some kind of mystery to be explored. These applications are scenario based and they are related to specific texts or activities from the EFL textbooks. In one of these applications, for instance, Sherlock is called upon to find a thief who stole a famous painting from a museum. In order to solve the mystery learners should decode a hidden message by a blind witness who heard the thief, follow the clues to find the thief and get back the painting. To do so they have to
use the Braille code (Figures 27-28). These multimedia applications use text, audio instructions, visual images and videos.

In addition to the mystery series, we also developed a ‘Lost’ series with different episodes. In one of them, the ‘Time Capsule’, a robot from another planet who travels in time has collected a number of objects from his trips to Earth and needs some help to connect these objects with the correct time periods. EFL learners travel through time and put these objects (e.g. a cowboy hat, the first personal computer, a Greek amphora, an Egyptian papyrus, etc.) on a timeline. Although they are related to specific parts of the textbooks, these applications could also function as independent learning objects and can therefore be used in other educational contexts as well.

Another type of digital enrichment that falls into the category of exploratory materials are the English Quests. The idea behind this type of enrichment has been the digitization of the projects included in the EFL textbooks along the lines of webquests (Barros & Carvalho, 2007; Simina & Hamel, 2005; Thaver, Heng & Lim, 2003). Similarly to webquests, the
suggested projects in the textbooks quite often use internet resources inviting learners to search through the web links, assess a given problem, collect and analyze information about it from different sources and finally synthesize a response of some kind by creating a final on- or off-line project.

Figures 31-32: The first page of an English Quest application (left) and the main menu (left) (from Think Teen! 2nd Grade of Junior High School, Beginners)

Each English Quest focuses on a specific theme and it is based on the description of the project work included in the students’ book as well as the detailed instructions included in the teachers’ book. Evaluation charts for self-assessment have also been prepared for each one of the English quests. Following the categories of a webquest, an English Quest consists of the following parts:

Introduction it sets the context and provides some background information
Task it describes the final product that has to be completed by the end of the project
Process it outlines the specific steps learners should follow to complete the assigned task and offers a list of online resources for learners to find relevant information for the completion of the assigned task
Evaluation it includes an evaluation chart for learners to measure their performance
Conclusion it reminds learners about what they have learnt and encourages them to extend the experience to other domains
Teacher Instructions it offers teachers guidelines about the different stages of the quest.

This inquiry-based application puts together information about a project found in the EFL textbooks and through its menu it provides a scaffolding learning structure which promotes learning in context (Laborda, 2009).

4.4.3 Writing apps

Writing apps is the most demanding type of enrichment, both in terms of content and multimedia design, developed during the third year of the project for the writing tasks of junior high school EFL textbooks. The aim of these applications is to guide EFL learners in every step of the writing process through a genre-based approach to writing instruction (Martin, 1999; Rothery, 1996) which places emphasis on the communicative context of the writing task, on analysis of a model to illustrate appropriate organizational and language
choices and on scaffolding, a process whereby the writing task is prepared following a step-by-step procedure.

After an analysis of all writing tasks included in the Think Teen! textbooks, twelve writing tasks were selected as representative of different writing genres that EFL learners should master. These include genres such as article, report, narrative, biography, description, mediation, journal entry, poster, CV, application and advice letter. Taking into account related literature, learners’ level and exposure to the English language, as well as the pedagogy of genre-based and process writing that was selected by the textbook authors, for our applications we decided on a pedagogical model that consists of the following parts:

Introduction it introduces EFL learners to the genre they are asked to produce and the general theme they will deal with in the writing app
Writing task it presents the specific writing task and an analysis of the communicative context of the task: who writes, what to whom and for what purpose
Model text it analyzes a model text on the same genre in terms of organizational patterns (what is included in the introduction, main body and conclusion) and lexicogrammatical features in order to illustrate the writing style of the specific text (formal, semi-formal, informal, chatty, etc)
Scaffolding it provides a step-by-step guide to help learners construct their own text
Language Bank it offers some examples of lexis and grammar that would be useful for the specific task.

The content of each writing app was first prepared in a storyboard consisting of two parts: what is to be shown on the screen and what to be heard during the application. Taking into account learners’ age and level we decided to present information in English and to have a voice over in Greek explaining what learners have to do in their task and elaborating on the presented materials. It was considered that the use of the Greek language would make the application friendlier and at the same time it would help develop learners’ interlanguage awareness. A computer generated voice over was selected both for convenience purposes and for adding a playful tone in the application. Overall, this type of digital application, as Derewianka (2003) notes, facilitates writing through modelling the genre, demonstrates the writing process, facilitates brainstorming and guides learners through drafting and revising.

![Figures 33-34: Screenshots from a writing app on journal entry](image-url)
5. Conclusion

The aim of the paper has been to provide an overview of the work conducted by the English Language Group of the Digital School Project within a period of three years in our attempt to enrich Greek State EFL textbooks with digital materials. To our knowledge this has been the most extensive project at a European level to attempt digital enrichment of the textbooks used in all school subjects. It is therefore important to outline the principles adopted in the design of the digital enrichment and to present the rationale of the different types of materials. The digital enrichment of the EFL textbooks, as we have seen, addresses different aspects of the EFL curriculum and covers a variety of materials, including informative, instructional, experiential and exploratory digital materials. For the implementation of these materials a number of different tools and software were used, such as software for video production, comics maker software, presentation software, online tools for infographics, an online database for the glossaries, flash engines, online puzzle and quiz makers, etc. It is true that rapid technological changes may make digital resources ephemeral. However, by placing emphasis on pedagogical principles and criteria and by adopting a principled approach to digital enrichment, we wanted to ensure that this attempt is characterized by pedagogical consistency and relevance for the Greek EFL classroom.

The perspective adopted in this paper is that of the materials development group. Future empirical studies will need to explore the effects of these materials on language learning and their “actual communicative effectiveness” (Tomlinson, 2012, p. 146), compare the effects of different types of materials which aim to achieve the same objectives, and investigate the impact of the different modes and media employed in these materials (e.g. by comparing the impact of materials delivered through digital and print media). Taking into account the complex relation between print textbooks and digital materials (Bruillard, 2007), future research should also explore the ways in which digital enrichment materials relate to the digitized EFL textbooks. Moreover, it should be considered that any research on digital textbooks and digital materials is inevitably multidisciplinary involving analysis of the ways multimedia and hypermedia design interacts with content development and new pedagogies in this complex communicative context (Mitsikopoulou, 2013). Most importantly, we should keep in mind that the new types of modalities used in the digital EFL textbooks which are delivered through an open online platform expose students to new ways of meaning making and new ways of learning.

Notes

1. The members of the English Group are the following (in alphabetical order): Eleni Argyriou, Giannis Bitros, Antigone Bratsoli, Mary Frentzou, Giouli Gyftoula, Vassilis Hartzoulakis, Katerina Makri, Susan Moutsouroufis, Sophia Mysirlaki, Katerina Nicolaki, Dimitris Paras, Chryssanthi Sotiriou and Linos Viglas.
2. Localization may take different forms. In the case of international publications, for instance, localization of materials may refer to its modification in order to reflect local issues and content. This is not the case though with the Greek EFL textbooks, which have been particularly designed by local authors specifically for the Greek EFL context.
3. This observation is attributed to Dr. Katerina Makri, a member of the English Group, who first made this insightful comment.

5. The members of the English Group would like to thank interactional designer George Piskopanis for his valuable help and the high quality graphics that he prepared for this and the other types of digital enrichment (picture dictionaries, webquests and writing apps).

References


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Developing an online distance training programme for primary EFL teachers in Greece: Entering a brave new world

The purpose of this paper is to present and discuss the rationale, pedagogic and instructional design principles underlying the development of a distance online training course for primary EFL school teachers in Greece. The need for the development of a blended learning training programme for primary EFL teachers with an online distance education course at its heart arose with the introduction of English in the first and second grade of all-day primary schools in Greece in 2010 and was based on an investigation of teachers’ profile carried out in the first year of project implementation. The paper will discuss the pedagogical as well as the instructional design principles for multimedia learning that have informed the development of the –e-course and how the materials can (have been) be adapted for use in face to face seminars, providing thus an example of a pedagogically informed and coherent distance e-training programme for primary EFL teachers which can be adapted for use in blended learning environments.

Evdokia KARAVAS
1. Introduction

With the growing use of technology and the severe financial crisis facing school systems and universities throughout the world, the number of people pursuing an online distance education course is growing exponentially. While in 2002, 34.5% of American colleges and universities offered fully online degree programs, in 2012 the percentage almost doubled (62.4%). According to Ambient Insight Research (http://www.universityfacts.com/online-universities/distance-learning-vs-online-education/), more than 44% of all higher education students were taking some or all of their courses online in 2009. They project that the number will rise to 81% in 2014. Online training courses for language teachers have followed a similar trend. England (2012) states that there are more than 40 university based TESOL Masters level programmes taught online and by distance and more than 400 private institutions offering certificates in TESOL online. Indeed, as experience shows, online education as an alternative approach to teaching and learning has met with unprecedented popularity since it offers the flexibility to reach a wide-range of audiences who are separated geographically at the fraction of the cost of campus based training (Shankar and Shankar, 2010). As a result of these developments especially within the last decade, education and training have undoubtedly entered a brave new online world.

The decision to develop an online distance training course for primary school EFL teachers within the context of an innovatory project (PEAP) which involved the introduction of English in the first and second grade of primary school, was not prompted by the spread and popularity of e-learning nor was it based exclusively on concerns of cost effectiveness. Rather the results of the teacher needs analysis survey carried out at the beginning of project implementation and the various challenges faced, created the need for the development of a blended learning programme with an online distance training course at its core. The distance electronic training course developed for primary school EFL teachers in Greece consists of 6 self-contained modules focusing on various areas of young learner ELT methodology which were identified on the basis of the needs analysis survey and the goals of the EYL curriculum (see http://rcel.enl.uoa.gr/peap/). Given that online learning and training have been accused as being “atheroretical”, lacking robust pedagogical foundations, conscious attempts were made to develop a pedagogically informed and coherent distance e-training programme for project teachers which took into account instructional design principles for multimedia learning relating to online navigation, organization and presentation of content, self-evaluation and assessment of student learning (Clark, 2002; Mayer, 2001, 2005). The pedagogical principles underlying the development of the training materials have been drawn from Bandura’s (1977) social learning theory and have been based on Knowles’ (1980) principles of adult learning. The paper, after presenting the main features of the project and the main issues and challenges faced in the development of an
effective training programme for PEAP teachers, will demonstrate how the principles mentioned above have been materialized in the development of the e-training course and how the materials can (have been) be adapted for use in face to face seminars.

2. Introducing English in the first and second grade of public primary schools: The PEAP project

The project which has come to be known with the Greek acronym “PEAP”, was launched in 2010 and was developed within the context of a European funded project entitled “New Foreign Language Education Policy in Schools: English for young learners” (see Dendrinos, 2013). It aimed at introducing a totally new component in the Greek educational system, i.e. English as a foreign language in the first and second grades of Greek public all day primary schools, which, until 2010, was taught as a foreign language from the third grade of primary school onwards. Responsibility for the development and implementation of the project was given to the Research Centre for Language Teaching, Testing and Assessment (RCeL) of the Faculty of English Language and Literature, University of Athens (www.rcel.enl.uoa.gr) in May 2010. The project was launched initially in 800 all day primary schools throughout Greece in September 2010, thus giving the project team essentially 4 (summer) months to prepare.

The programme involved a) the development of a curricular framework for the first and second grade of primary schools, b) the a posteriori development of syllabi for each grade and c) the design and development of new teaching materials and learning experiences for 1st and 2nd grade learners.

The purpose of the two-year course for which the PEAP curriculum has been designed is to introduce young learners to the oral mode of the foreign language and through it to develop “basic interpersonal communicative skills” (Cummins, 1979) needed in social situations, relevant to young learners, using day-to-day language. The curriculum, aimed at developing a pre-A1 level oral ability, promotes a ‘learning by doing’ approach and the content is attentive to learners’ social, cognitive, affective and psychomotor skills. The curriculum materials consist of a series of tasks embedded in specific sociocultural contexts, designed to prompt young learners to use the target language creatively, often relating it to their mother tongue (see Dendrinos, 2014). These tasks are organised in ‘cycles’ which correspond to school semesters and are built around topics Greek children aged 6-8 years old are familiar with. Accompanying each task are detailed teaching guidelines organised as lesson plans, which describe the linguistic and pedagogical objectives of the task, resources and materials needed, the procedure to follow for the implementation of the task, class organisation, ideas for differentiated instruction, suggestions for learner evaluation and links for extra practice. All activities and materials related to the two year PEAP programme are uploaded and are accessible to teachers through the PEAP portal: http://rcel.enl.uoa.gr/peap/.

The PEAP programme can be characterised as a pedagogical primary innovation (see Marke, 1997). Such innovations involve changes in teachers’ classroom practices, lesson content and/or teacher-student roles and relationships as well as changes in teacher beliefs and principles underlying the new materials and approaches. These types of innovations are
the most difficult to implement because change has to happen at all levels (materials, teaching skills and teacher beliefs) if the innovation is to achieve its objectives and become effectively implemented. The inherent difficulties of implementing pedagogical primary innovations are however compounded by context specific factors which may create insuperable obstacles to implementation and lead to innovation rejection and failure.

2.1. The development of the PEAP teacher training programme: issues and challenges

Effective change in practice is synonymous with continuous and systematic teacher education. In cases of pedagogical primary innovations as this one, teacher training is key to effective implementation of the programme and its contextualisation to local needs and constraints. Certainly, the development of an effective, cost-efficient and contextualised training programme for newly appointed project teachers constituted one of the most challenging components of the project. Given that the programme comprised a pedagogical primary innovation which necessitated change at the level of classroom practice and teacher beliefs, the training programme encompassed features of normative re-educative and empirical-rational strategies to innovation (see Waters, 2009). Normative re-educative strategies to innovation assume that people are rational and intelligent beings but recognise that people’s actions and behaviours are guided by their values and beliefs. Therefore change in teacher knowledge and behavior must be preceded by change in ideology, a change in values and attitudes. Rational-empirical strategies assume that people are rational beings and will adopt change once they are convinced of its benefits and rewards to them.

One of the first great challenges that the project team had to face was the fact that no baseline evaluation had been carried out by the Ministry of Education and no information regarding the teacher’s and the school’s profile was available prior to the launch of the project. This information, however, was absolutely necessary for deciding on the programme’s aims and content. In view of this “information gap”, it was thus decided that the first year of project implementation would focus on a) disseminating the innovation by informing teachers of the main principles and features of the project and b) carrying out a baseline evaluation in order to identify project teachers’ needs.

Two conferences were organised by the project team (October and November 2010) with the aim of informing School Advisors, primary school teachers and school principals of the aims, principles and innovatory features of the EYL project. Each conference lasted for two days and was attended by over 600 teachers and School Advisors. All talks and presentations were professionally videotaped and uploaded on the project site to be accessed by all primary school teachers involved in the project. The Greek PEAP project site was developed (in Greek) with information about the programme, videos of the conferences that were held, articles and studies relating to TEYL, and links to sites with young learner materials.

Seventy five, 4-hour seminars were also carried out by School Advisors throughout Greece with the aim of informing primary EFL school teachers within their districts of responsibility of the main principles and features of the project. A total of 1300 teachers attended these seminars. The materials used during the seminars were developed by the project team. Finally, fifteen primary school EFL teachers involved in the working groups responsible for
developing and evaluating project materials for young learners were funded to attend an intensive specialist online course on Teaching Young Learners offered by the British Council. (June to August 2011).

As information events were being organised throughout the country, a baseline evaluation, which included a survey of our teachers’ profile and the school units they were appointed to, was carried out. The baseline study began with the onset of the project (September 2010) and lasted until December 2010. More specifically three sources of data were utilised:

• Survey of the profile of 897 teachers of project schools through a questionnaire completed during teacher information seminars and online.
• Profile data from 1300 teachers across the country that took part in information seminars organised by School Advisors. Information about the teachers’ difficulties and training needs was collected through School Advisor reports of their seminars.
• Survey of the profile of school units through online questionnaires that were filled in by the 254 pilot school headmasters. They provided information about their schools, their teachers and their students.

The data gathered provided a fairly clear picture of teacher needs and difficulties and the constraints of their classroom contexts. The findings highlighted the diverse characteristics and training needs of project teachers while other contextual constraints made the development training programme even more challenging.

The survey of the profile of project teachers revealed, predictably, that all project teachers were specialist language teachers having completed a four year university degree. Although well over half of the sample had experience in teaching at primary level, the majority (60%) had no experience in teaching learners of the specific age group while the overwhelming majority (90%) had not received systematic training in EYL methodology. One third of the sample were also novice teachers with 1 to 5 years teaching experience and had received no focused training in EYL methodology. In addition, in the vast majority of PEAP project classes (89%) a significant number of students were from different ethnic backgrounds and were learning English as a third language.

Another challenge in the development of the PEAP training programme was that due to school mergers, which were decided by the government as one measure against the serious financial crisis facing Greece, the project schools in the second year of project implementation rose from 800 to 960. As a result of these mergers, the teaching body in project schools changed by 40%. Moreover, during the second year of programme implementation, the School Advisor evaluation/selection process took place (May 2011-December 2011). During this time School Advisors were inactive waiting for the decision of the selection process and could not act as trainers for the PEAP Project. After the selection process, the composition of the School Advisor body for English changed to some extent. This unpredictable development made clear that designing a long term coherent training programme with face to face seminars spanning the three years of the project is not viable due to constant changes in the composition of our teaching and trainer body.
The training programme had to overcome yet another obstacle: the geographical location of project schools. A fair number of our project schools are located in remote areas and islands in Greece which made the provision of face to face seminars to these teachers extremely costly in terms of time, money and human resources. It was thus realized that face to face seminars by school advisors to geographically dispersed teachers would pose threats to the quality and “reliability” of training due to the inherent difficulties of coordinating and managing a large group of trainers who have not specialized in EYL methodology, and could not guarantee that a consistently high level of training will be delivered to all project teachers throughout Greece.

The findings of the baseline surveys and the constraints mentioned above guided the design and development of the PEAP training programme. The training programme had to be viable and sustainable regardless of changes in the composition of the teacher body or in the composition of our trainer group. The training programme had to be coherent offering training in more general areas of EYL methodology and progressively leading to training in more specialised areas and flexible in its content capable of a) addressing a very diverse group of teachers with a wealth of different training needs, b) covering the needs of the less and more experienced teachers and c) effecting change in teacher beliefs without being overly didactic and theoretical but grounded in examples of actual practice. The programme also had to be flexible in its form capable of reaching out to project school teachers located in remote areas and islands in Greece.

In order to ensure that all teachers have the same training opportunities, in terms of quantity and quality, it was decided that the training programme would adopt a form of blended learning including various forms and means of training. More specifically, the Primary EYL Training programme adopted the following forms of delivery:

- a) an online training course called e-course for primary school EFL teachers which consists of self contained modules focusing on various topics which have been identified on the basis of our teacher surveys and on the basis of the curricular materials
- b) face to face seminars delivered by School Advisors using materials adapted from the online course
- c) face to face seminars delivered by the project team and organised by the School Advisors using materials adapted from the online course
- d) tele-training seminars delivered by the project team and organised by the School Advisors in remote areas of Greece
- e) one day conferences delivered by the project team and organised by the School Advisor.

This planning was innovatory for the Greek teacher training context being flexible in its form and content, contextualised, appropriate in response to the needs of classroom teachers, systematic and continuous. Moreover, this planning served more than one purposes. First, it gave us the opportunity to contact and interact with the teachers implementing the Project in schools both in the broader area of Athens and in the countryside. Secondly, it gave the School Advisors the opportunity to refresh their knowledge and information about the Project and re-examine their attitudes towards TEYL as well as their training practices. Last
but not least, it imposed integration of ICT both in our training and teacher professional development practices and in the teachers’ and the School Advisors’ training experiences.

2.2. The PEAP teacher training and development programme

The PEAP training programme through all its forms of delivery aims to familiarize teachers with the basic principles of the EYL project curriculum and with the process and techniques required for the development of children’s social literacies through the foreign language. The educational objectives involve:

1. Awareness of:
   - the way children think and learn
   - the way first language learning is related to the early development of the second language at school
   - the role(s) of the teacher of English in the primary EYL classroom
   - teaching techniques and activities appropriate for the particular age group

2. Modification of teaching practices:
   - adopting practices which motivate children in the classroom and facilitate the learning of English in a natural and enjoyable manner

3. Professional Development Objectives:
   - development of reflective skills
   - development of digital literacy skills

The online distance training course for primary EFL teachers, accessible to all project teachers, is written in English and is called: “E-course for primary school EFL teachers”. It aims at raising teachers’ awareness of how young learners think and how they learn language and acquainting them with teaching practices and techniques appropriate for this age group. It consists of 6 self-contained modules focusing on various topics which have been identified on the basis of our teacher profile survey and on the basis of the curricular materials (see Figure 1).

More specifically, the thematic units (modules) are divided into two categories:

1) The first unit called Introduction to teaching young learners provides the general theoretical background and basic principles for teaching young learners. It focuses on research findings and principles relating to children’s cognitive, linguistic, affective and social development as well as issues relating to classroom management.

2) The second category includes 5 modules which relate to various teaching practices and techniques appropriate for this age group. The modules focus on materials and tasks that form the core of the curriculum, that is using stories, songs & chants, arts & crafts, games, technology in the young learner classroom etc.

All modules have the same structure and have similar ways of navigation. They can be studied in any order and as many times the teacher wishes. Detailed information and guidelines on how to use the on-line training platform and how to navigate throughout the modules are provided. All practicing public school EFL teachers have access to the
programme as long as they login and obtain a password. The first module is open and accessible to anyone who wants to get a glimpse of the nature and content of the training course.

3. Issues and challenges in the development of online distance education training programmes

The emergence of technologies as powerful tools for teacher learning and teacher development is revolutionary since they offer tremendous potential for teachers to stay in their classrooms while meeting the constant skills improvement needs is inherent in the teaching profession. Given the economic crisis and the substantial financial, human and technical resources needed to train large numbers of teachers, if designed and used properly, information and communications technologies have the potential to make teacher training more effective, affordable, and flexible (see Coulon et al, 2004).

Many studies show that online education produces learning outcomes equal or greater to those of conventional face-to-face education if it employs appropriate techniques and skills in the design and implementation of its media-mediated learning programs (Carter, 1996; Jung and Choi, 1999; Russell, 1998; Thompson, 1996; Thompson and Chute 1998; Verduin and Clark, 1991). Online learning offers “anytime, anyplace learning” and its potential rests on its ability to deliver multichannel instruction (encompassing print, audio and visual based content) and to provide multiple formats for real time communication and collaboration with peers across the globe (Burns, 2011).

Online teacher training is seen to have several benefits: a) teachers can access in-service training without leaving their classrooms; b) teachers can improve their computer literacy; c) teachers are better able to interact with their trainers and other teachers online; and d) once a database of online courses has been developed, teachers can access those courses that meet their individual needs. According to Copland and Garton (2012), one of the greatest advantages of online learning lies in the possibility afforded for situated learning since teachers can investigate new ideas and approaches and their application in context within a supportive online community.

Unfortunately, though, many e-training programmes have proved ineffective in achieving their stated aims either because the internet is used simply to deliver print documents via email (Healey, 2012) or because programmes take advantage of hypermedia technology in their design but lack a solid pedagogical foundation (Henry and Meadows, 2008) or because they consist of traditional materials which have been simply transferred to on online environment (see for example Kocoglu et. al, 2011). Online learning does not simply constitute another learning environment; it is a categorically different learning environment (Henry and Meadows, ibid) with its own dynamics in which it is not the medium (technology) itself which leads to learning but rather the judicious choice of instructional methods and techniques which are used to help learners process new information in ways that lead to learning (Clark, 2002). In online learning, technology is simply the means to learning and not the end. It is a vehicle and not a destination. Technology is used because of its potential for differentiated learning, for the different modes of interaction and cooperation it makes possible and for its potential to stimulate active learner involvement in the learning process.
Rather than merely presenting learners with content, online learning needs to purposefully and strategically engage learners in activities and interaction, to build a sense of community among learners separated in space and time, to support and cater for differences in learning styles and strategies. It thus requires a different inclusive pedagogy that is truly learner centered (Healey, 2012). Many studies have shown that if online education is to produce learning outcomes equal or greater to those of conventional face-to-face education, it must have a sound pedagogical foundation and must employ appropriate techniques and skills in the design and implementation of its media-mediated learning programs (Carter, 1996; Jung and Choi, 1999; Russell, 1998; Thompson, 1996; Verduin & Clark, 1991). The development of online learning experiences will need to be based on the curriculum, the needs of the target audience, the needs of adult learners, the organizational context, its culture and its inherent constraints. These will determine the choice of teaching strategy, the choice of technologies required to meet learning objectives and the materials and learning activities which will need to stimulate learner interest and motivation. In this sense, there is no one best way in designing e-learning experiences since e-learning project development is context dependent and different organizational contexts will require different solutions (Coulon et al, 2004).

Figure 1: Contents of the e-course for primary school EFL teachers

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4. Stages in the development of the e-course for primary EFL teachers

In contrast to traditional training programmes, online training programmes are more complex in their design, development and management requiring decisions judiciously balancing classroom and distance learning, teaching strategies, technologies, tutoring techniques, modes of collaboration and interaction. As Coulon et al (ibid: 80) in their review of e learning projects state “the designer (of e learning experiences) has to take into account a far greater number of variables than in traditional learning”. At their very basic, online training programmes require the collaboration of subject matter specialists, e-learning specialists, and a project coordinator who with clearly differentiated roles and responsibilities need to develop a common technical and pedagogical language, a working language in order to communicate and cooperate effectively during the development of the project. In the case of the PEAP online training course, various participants in different roles contributed to its development. The project team consisted of the training project director (who had the overall responsibility for the development of e-course) the training coordinator (responsible for the coordination of the various stages), ELT teacher trainers and school advisors (responsible for the development of training materials), PEAP project teachers (responsible for the evaluation of the materials) and the e-learning group of specialists consisting of a) distance education instructional designer, b) an e learning specialist and c) a graphic designer (see Figure 2 below).

On the basis of the results of the teacher profile survey (see section 2.1), the principles of adult learning (Knowles 1980) and the principles of the PEAP curriculum, the project team began with an identification of the goals and learning outcomes of the course and a selection of themes that would constitute the focus of each module. The themes and topics and examples for each module were selected on the basis of teachers’ needs and care was taken to scaffold the information within each model so that new information was linked to previous knowledge (Morland & Bivens 2004). The next decision concerned the form of the training materials which had to be developed from scratch. It was decided that the materials will be fully online and fully multimodal; this would provide the opportunity for a more comprehensive presentation of the information, would reduce learning time, would facilitate teachers’ comprehension of abstract terms and notions, would facilitate teacher interaction with the materials (Clark & Mayer, 2011). Creating online materials is a very time consuming and laborious process. According to Chapman (2010), the development of one hour’s worth of e learning materials requires around 200 to 300 working hours in which many different experts need to cooperate (subject matter experts, teacher trainers, instructional designers, e learning specialists). After the draft materials for each module were developed, the module was given to practicing PEAP teachers and English school advisors to evaluate through an online questionnaire. The feedback provided was taken into account in the revision of the module materials. Each module roughly took around 8 full time working months from design to final revision.

5. Instructional design principles guiding the development of the PEAP online training course

The development of the training modules for the PEAP online course took into account and were based on Knowles’ (1980) principles of adult instruction, on principles of Bandura’s
social learning theory (1977) and instructional design principles for multimedia learning (Morland & Bivens, 2004; Moreno & Mayer, 2002). More specifically, the learning principles that underlie the e-course for primary school EFL teachers are the following:

a) Training must clearly address learner’s needs. Adults become ready to learn things they need to know and do in order to cope effectively with real-life situations.
b) Training must respect and build on the life experiences and previous knowledge of learners. There are individual differences in background, learning style, motivation, needs, interests, and goals, creating a greater need for individualization of teaching and learning strategies. The richest resource for learning resides in adults themselves; therefore, tapping into their experiences through experiential techniques (discussions, simulations, problem-solving activities, or case methods) is beneficial.
c) The connection between training and the application of what is learnt must be clear. Adults are life-centered (task-centered, problem-centered) in their orientation to learning. They want to learn what will help them perform tasks or deal with problems they confront in everyday situations and those presented in the context of application to real-life. Adults need to see the relevance of what they are learning to their life experience.
d) Most human learning is carried out observationally. From observing others perform one forms an idea of how new behaviours are performed and on later occasions this coded information serves as a guide for action (Bandura, 1977).

Moreover, principles for the design of effective e learning materials were taken into account (see Clark, 2002) while conscious efforts were made to develop modules focusing on one a specific theme/topic whose content was complete, relevant, accurate, culturally sensitive. Materials and examples used were drawn from and were relevant to teachers’ classroom contexts in order to stimulate teachers’ interest and motivation. Content was organized in such a way so that new knowledge is built upon prior knowledge and increases in complexity allowing for deeper understanding.

All modules share the same structure and have the same navigation routes. Each module begins with a detailed presentation of its overall aims and learning outcomes for the module- a central principle of adult learning programmes (Morland & Bivens, 2004). There is always some kind of input reading text at the beginning which teachers are required to study. This pre-reading text provides the context of the module and highlights many of the principles that will be discussed throughout the module.

The content and units of each module are presented on the left sidebar and on screen which can be accessed by clicking on either (see Figure 3). Each module contains theoretical background information relating to the module theme and organised in increasing complexity. This information is presented in informal non-academic language since research has shown that a personal tone to written or oral online training materials activates more mental processes and stimulates student interest (Clark & Mayer, 2011). The content of each module is broken down into instructional articles (Morland & Bivens, 2004). These are short, concise documents conveying relevant critical information to support concepts and procedures. They function like subchapters in a book – each instructional article is essential
to an overall understanding of the subject, but they are written to stand largely on their own, to be read and understood independently. This allows for flexible navigation since some learners may study some articles in detail and may skip or skim others.

On-screen information is multimodal, combining written word with visual, audio and kineasthetic elements (e.g. pictures, sketches, diagrams, animation, extracts from videotaped PEAP project classes) thus facilitating and enhancing understanding (Moreno & Mayer, 2002). Teachers can choose to read or listen to the printed text on the screen depending on their learning style (Clark, 2002). Systematically through the module there are self assessment quizzes accompanied by detailed feedback, based on previously presented information.

Throughout the module new information is also accompanied, where appropriate, by relevant extracts from videotaped project English classes and interviews with project school teachers, facilitating the link between theory and practice. Videotaped extracts are used in...
two ways. Firstly, to demonstrate the concept or principles being presented (this stimulates observational learning, which helps teachers see how theory is applied to practice) and secondly, as input for various reflection activities involving pre-while and post-viewing activities (see Figure 4). These activities serve to actively involve teachers in the learning process and develop their critical reflection skills (Janicki & Liegle, 2001). As with self-assessment quizzes, detailed feedback is provided for all reflection tasks. The module ends with an annotated bibliography for further reading and suggested sites with related to the module topic material. Finally, after completing each module, teachers are requested to fill in an evaluation form commenting on the content and usability characteristics of the module.

Building on the self-directedness of adult learners and their need to participate in shaping the direction and content of their learning experience, primary school EFL teachers can study the modules in any order and any of the instructional articles in any order they wish offering maximum flexibility and autonomy in the learning process. In other words, the e-course for primary school EFL teachers follows a non-linear model of learning where each learner is responsible for shaping his/her own learning path.

Figure 3: Sample content of online module

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6. Using the e-course content for blended learning

Today, technology offers teachers the keys to unlock a vast world of opportunities available in meeting the goal of professional development. Once teachers have fulfilled the basic requirements of computer literacy and Internet skills, e-training can help them strike the difficult balance between pressure to deliver one’s ‘prescribed’ classroom curriculum on the one hand, and the obligation to maintain up-to-date qualifications on the other. Our contention though is that e-training needs to and must be supported by face-to-face interaction, especially at the early stages of teachers’ encounter with technology given Greek teachers’ lack of familiarity with forms of e-learning and their ensuing distrust in its effectiveness. While e-training can take professional development to higher levels of achievement and efficiency, it can only build on face-to-face training. Equally important is the supporting virtual community of trainers, mentors, peers and even students. Reviews of online teacher development programmes, highlighted the necessity of face to face meetings...
in developing a sense of trust between participating members and overcoming teacher isolation in schools. In his review of successful online learning and quality teacher development projects, King (2002) identifies the essential elements of best practice for teacher development programmes. Among these he notes that effective TDPs offer opportunities for in-depth dialogue among course participants about the content meaning, application, implication, provide opportunities for learners to ask questions and share responses in an environment that can be personalized to support responsiveness, trust and insight and facilitate collaborative work among learners. Thus, when the inherent benefits of face-to-face interaction and learning are combined with web-based learning experiences, a form of blended learning emerges. Blended learning programmes have been found to have positive influences on learner performance, student participation and motivation and to result in more active and deeper learning (see Bekele and Menchaca, 2008).

The materials of the e-course modules of the PEAP online training programme have been developed in such a way so as to allow their use in various forms of face-to-face training and/or other forms of online teacher development. Materials can be reused in face to face seminars, can be incorporated in other online e-learning platforms, or be used as input for collaborative work and discussion in online communities of practice. All module content, including instructional articles with content information, extracts of videotaped PEAP project classrooms, self-assessment quizzes and feedback, reflection activities and feedback, input readings have been uploaded on a separate space on the PEAP portal, accessible only to school advisors of English to use in whatever way they find suitable for the face to face training seminars they organize. Depending on the number and geographical location of teachers within their areas of jurisdiction, depending on their teachers’ needs and levels of expertise, their teachers’ computer literacy skills, school advisors can plan their seminars using the e-course materials on their own in their printed form or may combine printed training materials with the online module materials. They may choose to incorporate elements of the online module materials in their work in online communities of practice or use e-course module materials as input for reflective discussion among community members.

In general, the materials of the e-course are characterized by their interfunctionality, durability and flexibility. They can be used in different training contexts, be incorporated in various forms of teacher training and professional development, be transferred to other online environments, or be used in their own as part of a coherent e-course designed to develop teachers’ knowledge and skills in teaching a foreign language to young learners.

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**Note**

1. This project, executed within the framework of the Lifelong Learning Programme, through the Cohesion Policy 2007-13 National Strategic Reference Frameworks (NSRF), is financed by Greece and the European Union. The General Director of this Project, carried out by the University of Athens, at the Research Centre for Language Teaching, Testing and Assessment (RCeL) of the Faculty of English Language and Literature, is Professor Bessie Dendrinos, who collaborated for the purposes of the project with experts in the field of Early Language Learning from the University of
Athens and Thessaloniki, as well as with researchers from Greece and elsewhere. More info about the Project: http://rcel.enl.uoa.gr/rcel/peap.

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Teacher development and collaboration

Συνεργατικότητα και επαγγελματική ανάπτυξη των εκπαιδευτικών

Evangelia KARAGIANNI

Limitations inherent in in-service teacher training in Greece are often held responsible for the difficulty teachers face when they attempt to update their knowledge and skills as well as when they try to incorporate new approaches in their teaching practice. This paper, first, reports research which explored Greek primary school EFL teachers’ views concerning issues related to more effective approaches to in-service teacher training and, second, it presents aspects of the experimental approach we adopted in an attempt to circumvent some of the shortfalls of the existing in-service teacher training system as they are described in the literature. More specifically, taking into consideration the principles of adult lifelong learning as well as the effects reflection and collaboration as learning modes can have on continuous professional development, we carried out a project where four teachers exchanged electronic diary entries during a school year. The analysis of their diary entries offers invaluable insights and reveals that teachers can spot their weaknesses, are aware of different approaches to problematic situations and are willing to try suggestions offered by colleagues.

Οι εγγενείς περιορισμοί στην ενδοϋπηρεσιακή επιμόρφωση των εκπαιδευτικών στην Ελλάδα, συχνά ευθύνονται για τη δυσκολία που αντιμετωπίζουν οι εκπαιδευτικοί όταν προσπαθούν να εκσυγχρονίσουν τις γνώσεις και τις δεξιότητές τους, καθώς και όταν προσπαθούν να ενσωματώσουν νέες προσέγγισεις στη διδασκαλία τους. Η παρούσα εργασία έχει στόχο, πρώτον, να παρουσιάσει μια έρευνα που εξετάζει τις απόψεις των Ελλήνων καθηγητών αγγλικής γλώσσας στην Πρωτοβάθμια Εκπαίδευση σχετικά με αποτελεσματικότερες προσεγγίσεις της ενδοϋπηρεσιακής κατάρτισης και, δεύτερον, να περιγράψει τις πρακτικές μιας πειραματικής προσέγγισης που υιοθετήθηκε σε μια προσπάθεια να παρακαμψούν τις ερωτηματικές και τις υποχρεώσεις της ενδοϋπηρεσιακής επιμόρφωσης όπως αυτές περιγράφονται στη βιβλιογραφία. Ειδικότερα, χρησιμοποιήσαμε τις ιστορίες της δια Βίου μάθησης κα της μάθησης των ενηλίκων, καθώς και τα αποτελέσματα του αναστοχασμού και της
Key words: teacher development, in-service training, reflection, diary, collaboration, ICT

1. Introduction

There is general agreement that the quality of teaching and teacher education is a key factor in securing the quality of education and raising learners’ achievement (Commission of the European Communities, 2007). In this respect, continuous professional development (CPD) appears to be central whenever changes are to be induced to problematic areas (Atay, 2008, p. 139). Yet, in Greece the obsolete structures of the prevailing professional development schemes for teachers seem to have been a major obstacle to meaningful educational change for decades (Kastis, 2004, p. 121) and as a result teachers often encounter serious difficulties when they attempt to update their knowledge and skills as well as when they attempt to incorporate new approaches, methods and techniques in their teaching practice. A number of studies attest the fact that changes introduced to the Greek education system at different times failed to fulfil the aims set by those who designed and introduced them, often due to reasons relating to teacher training (see Karavas, 1993; Verdis, Papadopoulou, & Chalkiadaki, 2006).

This particular context has inspired a number of EFL researchers and practitioners (Flouridou, 2011; Gkantidou, 2005; Griva, 2005; Joycey, 2011; Karagianni, 2012; Kourkouli, 2010; Ntoula, 2007; Strymponi, 2010; Tsoukidou, 2010) to explore the Greek teacher training system in order to offer suggestions which could aid policy makers and stakeholders in general, first, to overcome the failure of the existing training schemes to cater for the teachers’ real training needs and, second, to implement constructive suggestions abounding in the literature. In addition, the growing body of research on the social psychology of teachers according to which teacher development is contingent upon a number of factors, which are often ignored, such as teachers’ personal motivation (Dörnyei, 2001, p. 157; Smith & Gillespie, 2007, p. 227; Suslu, 2006), centrality of teachers’ emotions (Hargreaves, 1998; Karagianni, 2008; 2012; Nias, 1996), involvement of teachers in self-development activities (Edge, 2001; Farrell, 2001) and collaboration with colleagues (Bailey F., 1996; Karagianni, 2012; Packett, 2002), has created a pressing need for in-depth research in the field of teacher development in Greece.

This paper reports findings based on research which utilised a social constructivist approach to EFL teachers’ professional development and combined peer collaboration, reflection, diary writing and Information and Communication Technologies (ICT) in order to explore whether an alternative approach to in-service teacher training of EFL teachers can surmount some of the weaknesses
found in the Greek in-service teacher training programmes (for more information on this study see Karagianni, 2012). More analytically, this study has taken into consideration the lack of similar research in the Greek context as well as the limitations of current in-service teacher training programmes and investigated whether a collaborative ICT-based approach of teacher diary exchange, which accommodates the principles of adult lifelong learning and shares characteristics with examples of good practice, can result in an innovative form of continuous professional development.

2. Theoretical perspectives in teacher learning and development

2.1. Teacher education, teacher training and teacher development

Teacher education, teacher training, teacher preparation or teacher development are some of the terms used most frequently in the literature when referring to teacher preparation in general or to the various stages of this preparation before teachers start their career or while ‘on the job’, either in their early, mid- or late career. Adopting Freeman’s distinction (1989, p. 37), teacher education is a superordinate term under which the other two coexist. Teacher training involves the acquisition and the mastery of a finite number of skills which constitute teaching and the address of immediate needs while teacher development encourages continuous growth and views teaching as a constantly evolving process and the teacher as the person who bears the responsibility for the struggle against professional atrophy. In this context, new ideas are put to testing and constant reflection is expected to be adopted as a way of moving teaching practice forward. Both terms are not limited by time, space, participants or purpose constraints. They are used to refer to structured training or development which is either designed and implemented by special institutions such as ministries of education and teacher training agencies, or is self- or group- initiated. In other words, they refer to both formal and informal or non-formal teacher learning.

Our study endorses Allwright and Bailey’s (1991, p. 200) informal approach of exploratory practice which places teacher development in a context of self-directed learning where teachers observe what they do, reflect on it, analyse it but also share their thoughts and feelings with colleagues in order to consolidate, develop or redesign their course of action. As we will explain later in this paper, teacher development can be traced when teachers, first, attempt to verbalise their thoughts and actions concerning both positive and negative aspects of their practice and, second, when they try to elicit answers from their own understanding of things through reflection, discussion and negotiation with others or from their colleagues’ understanding of the same issues and their suggestions.

2.2. How teacher learning can be enhanced

Teacher training programmes aim at improving teachers’ instructional practice by applying a number of methods and techniques which promote teacher learning and consequently teacher development. A first step towards such an improvement is to raise their awareness. Underhill (1992) underscores the importance of teachers’ awareness by viewing it as an essential prerequisite for teacher development. Teachers need to know what they do and why (Larsen-Freeman, 1983) but they should also be aware of any tacit influences exerted by past experiences
(Borg, 1998, p. 86). Such awareness develops more effectively when teachers are given opportunities to critically reflect on the origins, purposes and consequences of their actions and spot the mismatches between what they do and what they think they do so that change can be facilitated (Zeichner & Liston, 1987). Clearly then, reflection is a key component of teacher development since it can contribute to teachers becoming ‘active agents of their learning-to-teach processes’ and provides them with ‘the groundwork for continuous self-development’ (Velez-Rendon, 2002, p. 463).

As regards the ways reflection can be facilitated, there seem to be various approaches and means which have been employed in attempts to raise teachers’ awareness of their practice and foster reflection. Hatton and Smith (1995, p. 36) present four such strategies:

- action research projects,
- ethnographic studies and case studies of educational environments,
- microteaching and other supervised practicum experiences, and
- structured curriculum tasks.

Less formal but equally, if not more, widely spread options to teacher reflection include observations, discussions and writing about teaching experiences. Farrell (1998) explains that these activities can be carried out on an individual basis, in pairs or in groups and teachers can opt out for using only one of these ways of recording their experience or they can decide to combine some or all of them. Observations can be carried out by supervisors or by peers and can be accompanied by field notes, checklists and/or feedback sessions. Technical means such as audio or video recorders can be exploited and offer teachers the opportunity to observe themselves in privacy or with someone they trust if they wish. Discussions can be informal and private such as peer chats taking place in staff rooms or more formal and public taking place in the context of a conference or in a web-based forum. As far as writing is concerned, it can take the form of teaching diaries or journals, reflective lesson plans (see Ho, 1995) or lesson reports. Research has proved that integration of diaries or journals in teacher education is very effective in promoting teachers’ reflective skills (Bailey K. M., 1990; Wallace, 1996). Their use has been motivated from the view that writing is a social and cognitive activity which can lead to learning through a discovery process and learner involvement (Porter, Goldstein, Leatherman, & Conrad, 1990, p. 227). It offers important insights into teachers’ behaviour, beliefs and experiences and it can be utilised as a learning tool which can be exploited in teacher education to help teachers connect theory to their instructional practice and develop their reflective skills (Gilmore, 1996; Janisek, 1999). Moreover, as Reiman (1999) argues, writing ‘centres attention, clarifies thinking, provides a means of symbolising thought’ and stimulates inner speech (ibid: p. 599; quoting Luria & Yudovich, 1959).

Another feature which can enhance the effectiveness of reflection is its practice in social contexts (Zeichner & Tabachnick, 1991). Educational studies highlight the importance of social environments in the construction of teachers’ knowledge and support that peer collaboration in networks (Lieberman, 2000), often termed professional learning communities (Grodsky & Gamoran, 2003; Stoll, et al., 2003) or communities of practice (Wenger, 1999), has a strong effect on fostering teachers’ reflective skills and influences not only their professional development but
the quality of learning and teaching (Lamb, 1995; Mitchell & Sackney, 2000; Vlachos & Papaefthimiou-Lytra, 2008).

Farrell (1998; 2001, p. 369), for example, proposes the notion of ‘critical friends’, i.e., teachers who collaborate, discuss and reflect in order to improve the quality of teaching and learning, and gives evidence of how this type of friendship between teachers in Singapore can scaffold teachers’ thinking and promote their professional self-development.

Hofman and Dijkstra (2010) view teachers’ networks as an alternate form of professional development in reply to the failure to improve teaching through teacher development schemes applied in the past. They study the relationship between teachers’ networks and professional growth and claim that their results are in line with Cochran-Smith and Lytle’s study (1999) who showed that

‘professional development activities, performed together in networks, will help teachers to pose problems, identify discrepancies between theories and practices, challenge common routines, and try to make visible much of that which is too often taken for granted about teaching and learning in the classroom’. (Hofman & Dijkstra, 2010: 1039)

Finally, the positive contribution of networks to the affective side of teaching cannot be ignored. Teachers work together to fight professional isolation (Bolam, 2008) or because they value appreciation, acknowledgement, personal support and acceptance (Erb, 2002; Hargreaves, 2001). However, Hargreaves (2001) contends that collaboration with colleagues may impede opportunities for improvement since teachers tend to avoid disagreement and conflict, regardless of collaborating with close friends or more distant colleagues. This last point underlines the importance of mutual trust, respect and support between members of the group (Bolam, 2008) but also strikes a note of caution as to whether working with others may not always be a better option than working on one’s own (Mercer, 1995, p. 92). Therefore, offering a wide range of self-development options from which teachers themselves will be able to choose according to what suits them best is of utmost importance if we really want to take the best out of them but at the same time respect them as adult learners who have their own pace and preferred style of learning.

2.3. The use of ICT in teacher development

As we have seen in the previous section, instructional approaches which facilitate reflection and critical dialogue provide teachers with opportunities to make meaning from their experiences. When ICT facilities are utilised in this context, then teacher learning acquires new dimensions and offers considerable advantages. First of all, integration of technological tools (such as synchronous conferencing platforms, asynchronous discussion structures, social networking environments, video sharing websites, and so forth) in educational contexts provides the means to implement instructional approaches effectively (Jonassen, Davidson, Collins, Campbell, & Bannan Haag, 1995). Second, it promotes development of learning communities among teachers regardless of distance and time constraints. Being free of time and place constraints, this type of communication seems particularly suitable for a country such as Greece, where primary schools are often located in distant and isolated places and teachers in these areas are deprived of many of the facilities
offered to teachers working more centrally such as contacts with school advisors, access to libraries or opportunities to advance their career by taking up postgraduate studies (Nixon, 2001).

Another positive aspect of incorporating ICT options in teacher education, such as the use of asynchronous writing in e-mail exchange, can help EFL teachers improve their linguistic skills since more sustained interactions and greater syntactic complexity are promoted (Sotillo, 2000). Consolidation and improvement of students’ linguistic skills in a foreign language through the collaborative use of ICT has also been observed in studies focusing on Greek learners of English (see Vlachos, 2006; Vlachos & Papaefthimiou-Lytra, 2008) as well as when attending postgraduate studies offered by HOU in distance learning mode (Papaefthymiou-Lytra & Sifakis, 2011). Moreover, according to Ada (2010), engaging in reflective discourse with peers in a computer-supported collaborative learning environment improves reflective skills further and offers opportunities for self-development. Last but not least, teachers’ use of computers and the Internet in learning activities is likely to promote their continuing professional development (Davis, 1997, p. 167) with minimum social pressure (Chen, 2012) since, as Heng and Moor (2003, p. 334) claim, ICT tools free participants from the constraints of power relations and provide everyone with equal opportunities of participation in open discussions and information exchange.

2.4. The current teacher training context in Greece

Teacher training in Greece has suffered from inherent weaknesses related to basic teacher education, on the one hand, and to initial teacher training, on the other, for many years. With regard to basic teacher education, it has been widely admitted that teacher training cannot cater for its inadequacies (Xochellis, 1991). As we outlined earlier in this paper, teacher training should be a continuous process related to basic teacher education but it should also support teachers in service throughout their career and provide them with lifelong learning opportunities for professional development. Teachers should be acquainted with educational research during their initial training and encouraged to experiment with new ideas and draw their own conclusions. Further, they should be motivated to participate in learning communities in order to develop their reflective skills and enhance their teaching practice.

A second weak point of education in general, and teacher training schemes in particular, is the fact that they have unfortunately become a tug-of-war between political parties and governmental policies. Teacher training has operated as a system where governmental ideology is applied and teachers are made to conform to this ideology and apply it to their teaching practice without questioning it (Andreou, 1991; Athanasoula-Reppa, 1998; Kotsifakis & Kappos, 2001). Teacher training remains static instead of being dynamically evolving. Initiatives are not encouraged, conclusions drawn from the piloting phases of innovative projects do not seem to be taken into account and teachers are deprived of the opportunity to negotiate the content of the training courses in order to adapt them to their needs.

A third point is that in Greece, as Kazamias and Kassotakis (1995, p. 53) state, reality often differs from what is described in laws and circulars. Despite the fact that local educational authorities were established to achieve decentralisation of the Greek education system, we still face the paradox of all education-related issues to be regulated and validated by the Minister (Saitis, 1990). Additionally, there has been no serious attempt to evaluate the effectiveness of our education
system—whenever it was attempted, it met fierce opposition from teachers’ syndicates—nor is there any political willingness to develop some kind of scientific research into these issues. As a result, personal views, observations and experiences are often turned into scientific discourse which is taken for granted (Kassotakis, 1983; Xochellis, 1991). In other words, teacher training has been implemented in an unsystematic, fragmented and inconsistent way without being based on sound scientific research. Teachers’ needs have often been ignored and drawbacks of programmes implemented abroad or previous teacher training models applied in Greece have been transferred to new programmes without being analysed or evaluated. Very often newly-designed policies and programmes have ignored basic principles of adult education, lack originality and flexibility and disregard successful teacher training paradigms and suggestions made by researchers worldwide (see Villegas-Reimers, 2003; Scheerens, 2010) or European bodies such as the Directorate General for Education and Culture of the European Commission (Kelly et al., 2002).

Another point is that many agencies and institutes are responsible for teacher training, which is not negative per se, but the fact that there is little coordination and cooperation between them is certainly neither constructive nor beneficial. Very often teacher training programmes become fields of conflict between interested parties as their design and implementation brings not only prestige but additional financial support as well (Chronopoulos & Giannopoulos, 2001). Thus, due to insufficient cooperation between all relevant parties, teacher training often fails to combine scientific research with everyday teaching practice effectively (Andreu, 1991).

Despite all the shortcomings and complexities mentioned above, there has been some progress during the last decades. Regional Teacher Training Centres operating all over Greece have aided teacher training become less centralised and gave a large number of teachers the opportunity to develop professionally. Furthermore, the institution of school advisors, despite their limited number, has helped to improve our education system. School advisors have assumed an active role in teacher training and they have often organised school-based seminars focusing on the introduction of innovative programmes (one such programme was the recent introduction of English to very young learners in primary schools, see http://rcel.enl.uoa.gr/peap/en) or on facilitating school teachers solve local problems.

Another important aspect related to teacher training is the enormous funds coming from the European Union in the form of Support Frameworks to be spent on training teachers. This funding has offered Greece a unique opportunity which, if it was appropriately exploited throughout, could have upgraded teacher education and training tremendously. Two highly successful examples of utilising European funding on teacher training are the following:

a. Teacher training on the basic know-how use of ICT in which about 76,000 teachers completed the first training phase in 2002-2005 (Papadakis, Velissarios, & Fragoulis, 2003). A large number of teachers have also attended the second phase which is more demanding and links use of ICT to teaching practice (this is not available to EFL teachers yet).

b. The second more recent example is a piloting scheme called Major Training Programme which was attended by thousands of state school teachers in 2011 (www.epimorfosi.edu.gr). It aimed to acquaint primary and secondary school teachers all over Greece with the aims and principles of the new ambitious educational scheme of the Ministry of Education, called New School and the curricula accompanying it.
In conclusion, however, we should bear in mind that effective teacher training programmes are not those that increase teachers’ theoretical knowledge but those which reconcile theory to practice, succeed in changing teachers’ attitudes, views and teaching techniques and bring better learning outcomes.

3. Research design

3.1. Rationale

Taking into consideration the context described in the previous section, the aim of our research was two-fold; firstly, we wished to investigate the views of EFL teachers working in primary schools as regards important aspects of teacher development in order to corroborate the inadequacies of the teacher training system as applied to date and secondly, to apply an alternative innovative approach to INSET of EFL teachers and explore its potential.

More analytically, we wished to:

1. investigate what Greek primary school EFL teachers believe as regards teacher training, self-development, self-awareness, collaboration, the use of ICT and reflectivity
2. examine whether the exchange of electronic diary entries between members of a small group of colleagues can promote reflection and professional growth.

Thus, we formulated a number of research questions in order to achieve the aims of the study:

a) Are EFL practitioners interested in their professional development?

b) Are they satisfied with the INSET they have received?

c) Do they engage in activities which promote their professional development?

d) Do they collaborate with colleagues and does this collaboration help them think reflectively about their practice and enhance their professional development?

e) Can the use of ICT facilitate this collaboration further?

f) Do EFL teachers engage in development activities such as observing other teachers, being observed, being given feedback or keeping a teaching diary?

As regards the potential of our proposed model of teacher development, we considered a few more research questions:

g) How do teachers feel when they collaborate with colleagues?

h) Does peer collaboration help EFL practitioners develop?

3.2. Research methodology

Guided by recent trends in the field of teacher development research and in order to better serve the purposes of this study, a multi-method approach was adopted, consisting of different means of data collection, and multiple ways of analysis. This approach gave us the opportunity to capture different aspects of the phenomenon in focus making it, thus, easier to interpret the connection between the way EFL teachers view and feel about certain aspects of their job and the prospects our proposed alternative framework of INSET offers as regards teacher development.
3.3. Research Instruments

Two instruments were used for the purposes of this study; first, a questionnaire designated with the term Teachers’ Views Questionnaire (TVQ) was adopted. Second, the data collected from the TVQ, informed the design of the second research instrument, namely, the Collaborative Electronic Diary Exchange Project (CEDEP). In other words, by being aware of EFL teachers’ views and preferences regarding INSET from TVQ, we were able to construct a more effective teacher development model which provided us with the right framework to apply our theory to.

3.3.1. The Teachers’ Views Questionnaire (TVQ)

Questionnaires are known to be the most appropriate method of data collection when one is interested in the perceptions of individuals (Kumar, 1996, p. 104). Thus, first of all, TVQ served the purpose of this study which was to explore EFL teachers’ beliefs, views and preferences concerning INSET and teacher development. Second, the population of interest was geographically dispersed and this method would be more convenient and less expensive. Third, this method was chosen because it provides greater anonymity since there is no face-to-face interaction between the respondents and the researcher and the likelihood of obtaining accurate information is increased (ibid: p. 114). In addition, the use of this instrument was important because EFL teachers’ views as regards INSET had never been officially recorded separately from other subject matter teachers’ views with the exception of a few studies which examined smaller samples (see for instance Gkantidou, 2005; Griva, 2005; Joycey, 2011; Kourkouli, 2010; Ntoula, 2007; Strymoni, 2010; Ushsher-Crespi, 2004). Last but not least, the TVQ was used to inform the design of the qualitative data collection method (CEDEP).

Our sample (n=483) comprised about 1/10 of the total population of primary school EFL teachers. As we opted for convenience sampling (see Cohen & Manion, 1989, p. 103), the questionnaire was mainly distributed during school advisors’ seminars which took place in different regions of Greece. The advantage of the specific procedure of data collection was that a lot of EFL teachers from different geographical regions and of various socio-economic strata would gather at a specific place on a specific date and the response rate would be high. In order to cover the rest of Greece, a stratified random sample of primary schools was selected from the official list of primary schools of the Ministry of Education. These schools were initially contacted by telephone or via the school e-mail address and then the questionnaire was sent by e-mail or by post. The EFL teachers working in schools which were located in the area of Athens were contacted in person by the researcher.

3.3.2. The Collaborative Electronic Diary Exchange Project (CEDEP)

The second instrument, CEDEP, was used with a small number of volunteer teachers (n=4) for about a school year (25 weeks). CEDEP consisted of four elements; each participant’s profile of reflective thinking attributes (adopted from Taggart & Wilson, 1998, pp. 45-46), a short autobiography, their electronic diary entries and two reviews of the diaries and the project. The four participants were chosen among those who had expressed their willingness to participate in this project while filling in the piloting questionnaire and met all the requirements for participation. A Yahoo Group named State School EFL Teachers (accessible at
https://groups.yahoo.com/neo/groups/state_schools_EFL_teachers/info was set up in order to facilitate the electronic communication between the group members and the researcher.

The main task the participants had to perform during this project was to keep a diary once a week for a period of about 25 weeks. As explained earlier, diary writing is a useful tool for classroom research and a vehicle for teacher development as it is believed to promote reflective thinking (Bailey K. M., 1990; Wallace, 1996). For the purposes of this study, participants had to choose a particular class to focus on throughout the project and share a diary entry about the lesson they had with this class with the other members of the group once a week. More analytically, teachers were asked to provide details about the profile of the class they had chosen and describe what they did and what happened in that particular class on the day of the week they had chosen to keep their diary for. Following that description, they were encouraged to reflect on their teaching practice and seek alternative ways to achieve their aims better. Also, they were advised to ask their colleagues who participated in the project for advice, suggestions or comments on areas they felt they needed to improve or were in doubt as to whether they handled them effectively.

Moreover, as part of this task participants were asked to review their diary entries because just writing diary entries does not yield the greatest benefit and in order to really learn from this process, the diarist should be encouraged to read the journal entries again and try to discover the patterns therein (Bailey K. M., 1990). In our study, participants were encouraged to reread their diary entries twice during the project and write their thoughts and comments on them following a number of guidelines.

4. Presentation and discussion of results

4.1. The teachers’ views questionnaire results

As outlined earlier in this paper, one of the purposes of this study was to explore teachers’ views on teacher training. The findings obtained through the subjects’ responses to TVQ provided us with interesting answers to the research questions concerning EFL teachers’ views on INSET. First, most teachers in this study (50.1%) were generally positive about INSET offered by the state although it does not appear to fully satisfy their teaching needs (86.1%). In-depth analyses of the findings indicate that this positive attitude manifests itself in the great majority (77.2%) of EFL teachers attending INSET programmes regularly despite their not being compulsory. Moreover, respondents (79.7%) contended that INSET programmes do not generally disturb their personal or professional lives and when they do, it is mainly because they take place off working hours. As far as teachers’ preferences for INSET programmes are concerned, the majority of respondents (79.5%) prefer short-duration programmes that take place at conference centres or schools and focus primarily on practical issues. The majority of these findings are in accordance with the results of a major study undertaken by OEPEK (2007). There was, however, a slight dissatisfaction (43.5%) expressed as regards undergraduate preparation for real teaching situations revealing what is generally known as theory/practice dichotomy (Clarke, 1994; Strympsoni, 2010). Nonetheless, the reasons why respondents might not be feeling satisfied with their preparation for school teaching they had during university years could be associated, on the one hand, with the limited duration of the practicum included in their studies which had been oriented towards secondary school teaching for many years, and, on the other, with the fact that very few of the
respondents had attended the induction courses offered by the state when they were appointed although such courses are officially characterised as compulsory.

Findings regarding the content of the training courses offered revealed other interesting aspects of teachers’ training experiences. In this study a great number of teachers (46.2%) claimed that the in-service courses they had attended combined theory and practice and most training sessions were delivered either as lectures (49.8%) or as a combination of lectures and workshops. (47.5%) Yet, in this part of the questionnaire, another weakness of the system was brought to the foreground. According to many teachers (25.2%), the teacher training courses they had attended did not promote collaboration among colleagues or at least a large number of teachers (36.4%) were not certain as to whether they did. Lack of collaboration was also attested in the limited communication (75.1%) that takes place between teachers and school advisors. This was a very important parameter which was taken into consideration in this study. Thus, through the exploration of our proposed collaborative model of INSET we wished to provide stakeholders with a viable alternative to traditional INSET approaches.

As regards conclusions about EFL teachers’ perceptions about professionalism and self-development, the findings indicate that the vast majority (94.6%) of the teachers who participated in our research are interested in their professional self-development and engage in a number of activities to achieve this aim. More analytically, they subscribe to professional associations (43.6%), read EFL magazines and journals on a regular basis (66.3%) and attend seminars and conferences on TEFL (63.6%). Additionally, they try to keep their English at a good level mainly by using English in the classroom (46%) and having foreign friends (33.7%) and most teachers have tried to learn another foreign language for personal development reasons (52.2%). Another important experience which has positively influenced their professional development is the participation of some teachers in European projects (24.4%).

The findings relating to teacher perceptions about aspects of their teaching practice indicate that the majority of EFL teachers who participated in our study were aware of their advantages (72.9%) as well as their limitations (62.7%) as practitioners. Although this finding is of particular interest as it shows that teachers can apply critical thinking to their practice and reflect on what they do in the classroom, it is worth mentioning that a much smaller number of teachers (24.8%) were capable of spotting critical incidents in their career, analyse them and explain how that incident changed their course of action and improved their practice. This finding underscores the need many teachers may have to participate in learning activities which will help them raise their awareness of their classroom practice through observation, reflection and discussion.

Besides teachers being aware of their positive and negative aspects of their teaching, they reported a number of parameters that they perceived as conducive to successful or less successful teaching such as organisation, time management, patience, rapport, training and knowledge of the target language. This last point of target language development is another area of teacher training that deserves more attention as it is a rather neglected aspect and only occasionally has it been brought to surface by researchers in Greece (Karagianni, 2012; Papaefthymiou-Lytra & Sifakis, 2011; Ussher-Crespi, 2004).
As far as their views on collaboration, the use of ICT and reflectivity are concerned, the majority of respondents (88.4%) stated that they often discuss teaching problems with colleagues and share materials and teaching ideas with their colleagues (66.1%). They (78.5%) also regard peer observation as conducive to the development of their teaching skills. Furthermore, they believe that teacher training can be facilitated by the use of technology (90.2%) and that collaboration with colleagues through the Internet can help them deal with teaching problems (60.6%). Finally, the last section of the questionnaire brought to the foreground some contradicting findings. Although teachers stated that they reflect on their teaching (94%), this was not manifested in their responses about the use of instruments or techniques that are known to promote or facilitate reflection. In other words, they have almost never kept a diary to write their thoughts on their teaching (78%), they have almost never observed colleagues teach either live or on video (79.1%) and they have not audio or video recorded themselves while teaching. Another significant finding of this study is that the great majority of teachers have neither been observed teaching (87%) nor have they been given feedback on the way they teach (79.7%). These findings, which our research incorporated in CEDEP, need to be seriously considered by stakeholders and exploited in the design of future INSET programmes aiming to enhance teachers’ critical thinking skills.

### 4.2. The Collaborative Electronic Diary Exchange Project (CEDEP) analysis

Teachers who participated in our study had to share their diary entries and read their colleagues’ descriptions of their lessons. These diary entries (a corpus of 37,042 words as shown in Table 1 below) were analysed using ‘content analysis’ (Manning & Cullum-Swan, 1994) or ‘meaning categorisation’ (Kvale, 1996), where diary entries were broken down into smaller units for coding. Although codes are expected to reflect the researcher’s perspective, the data were not analysed with a preconceived framework in mind but we allowed ‘grounded’ categories of analysis to emerge (Straus & Corbin, 1998). We looked for patterns and themes and we kept re-examining data in light of developing theory (Seale, 1999, p. 92). This approach helped us expand, revise and refine our ideas so that final conclusions could be drawn.

<table>
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<th>Teacher A</th>
<th>Teacher B</th>
<th>Teacher C</th>
<th>Teacher D</th>
<th>TOTAL</th>
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<tr>
<td><strong>Total number of words written in all tasks</strong></td>
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<td>4,694</td>
<td>9,069</td>
<td>9,694</td>
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<td><strong>Diary writing (number of diary entries)</strong></td>
<td>20</td>
<td>16</td>
<td>17</td>
<td>20</td>
<td>73</td>
</tr>
<tr>
<td><strong>(number of diary reviews)</strong></td>
<td>2</td>
<td>-</td>
<td>2</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td><strong>Number of words written in diary entries</strong></td>
<td>9,878</td>
<td>4,694</td>
<td>5,536</td>
<td>7,423</td>
<td>27,531</td>
</tr>
<tr>
<td><strong>Average number of words per entry</strong></td>
<td>494</td>
<td>293</td>
<td>326</td>
<td>371</td>
<td>377</td>
</tr>
</tbody>
</table>

* a dash (-) shows that the participant did not do the task.

Table 1: Corpus collected during CEDEP
4.2.1. Levels of Teacher Development in CEDEP

Through the multiple levels of analysis we applied to CEDEP data, a teacher development pattern was identified. When teachers described their teaching experiences in their diaries and how they felt about what happened in the classroom (for a detailed analysis of the role of emotions in teacher development see Karagianni, 2012), a cycle of reflection was initiated which often revealed evidence of teachers’ personal and professional development. In Figure 1 overleaf, we can see a schematic representation of this teacher development pattern. The circular shape of the figure underlines the on-going process of teacher development and demonstrates how what appears to be an end in the process of teacher development, in reality, it comprises a new experience which becomes the threshold that initiates a new cycle of development, which, in our case, is self-development.

Finally, through a deeper analysis of CEDEP data and drawing on a number of studies on teacher development (see Bell & Gilbert, 1994; Golombek & Johnson, 2004; Hatton & Smith, 1995), we devised a four-level construct in order to study and measure teachers’ development.

More analytically, in our analysis of teacher development in CEDEP:

- **Level 1-development** is any systematic form of recording of what teachers do during their instructional practice and what they think about it.
- **Level 2-development** takes place when teachers turn to colleagues to share any thoughts on their teaching, to ask questions, to comment on what their colleagues write in their diaries or to answer their colleagues’ queries.
- **Level 3-development** occurs when teachers explicitly or implicitly draw on ‘expert’ knowledge to explore solutions or to provide a rationale for their course of action or to offer suggestions to their colleagues.
- **Level 4-development**, the highest form of development in our model, takes place when there is evidence that teachers change what they believe or what they do because they are convinced that a new approach is more appropriate or effective.

*Figure 1: A schematic representation of teacher development in CEDEP*
We placed change in the highest level of the construct because it is widely believed that ‘change is a slow, difficult, and gradual process for teachers’ (Guskey, 1985, p. 59) and despite teachers generally wanting to contribute actively to the improvement of their students’ learning, most of them face great difficulty accepting innovations that require drastic changes in their instructional procedures.

4.2.2. Teacher Development

As stated earlier in this paper, CPD emphasises practices that aim at professional and personal empowerment of teachers by means of reflective practice and critical thinking. It is an on-going, self-motivated learning process which brings one’s best abilities to the foreground but also encourages them to collaborate with more knowledgeable or more enthusiastic individuals (Edge, 2002) and share their ideas in order to improve their practice (Woodward, 2005). CEDEP incorporates all these core components of teacher development and provides numerous instances of on-going collaborative self-induced teacher learning. First of all, volunteering to participate in the project and not abandoning it despite the difficulties they faced was a major commitment on the teachers’ part and constitutes a teacher development process per se. Secondly, compiling autobiographies and writing a large number of diary entries and reviews on a regular basis and critically reflecting on them was another task they undertook and accomplished successfully. Additionally, commenting on their colleagues’ diaries and offering ideas and suggestions as to how they could tackle teaching problems more effectively constitutes additional evidence of teacher development (Bell, 1994; Bell & Gilbert, 1994).

Regarding the four-level construct of teacher development we described in the previous section, there was evidence of all four levels of development in our data. More analytically, as we can see in Table 2 below, out of the 837 teacher development instances we spotted, 62% are of Level 1 type. In our model Level 1-development relates to technical and descriptive reflection as teachers describe their teaching practice and attempt to explain what they do (Bell & Gilbert, 1994; Golombek & Johnson, 2004). Level 2-development (23.8%) is achieved when teachers communicate with their colleagues in order to seek advice on or a solution to a teaching problem, listen to their opinion or comment on their practices. This type of development appears to be very successful if we consider the fact that Greek EFL teachers rarely have opportunities to collaborate with colleagues so closely.

<table>
<thead>
<tr>
<th>TEACHER DEVELOPMENT</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level 1-development</td>
<td>519</td>
<td>29.4%</td>
<td>62.0%</td>
<td>62.0%</td>
</tr>
<tr>
<td>Level 2-development</td>
<td>199</td>
<td>11.3%</td>
<td>23.8%</td>
<td>23.8%</td>
</tr>
<tr>
<td>Level 3-development</td>
<td>91</td>
<td>5.1%</td>
<td>10.9%</td>
<td>10.9%</td>
</tr>
<tr>
<td>Level 4-development</td>
<td>28</td>
<td>1.6%</td>
<td>3.3%</td>
<td>100.0%</td>
</tr>
<tr>
<td>Total</td>
<td>837</td>
<td>47.4%</td>
<td>100.0%</td>
<td></td>
</tr>
<tr>
<td>No development</td>
<td>930</td>
<td>52.6%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>1767</td>
<td>100.0%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 2: Types of Teacher Development

As far as Level 3-development is concerned, percentages drop to a 10.9% as this type of development is much more demanding. In our model of analysis, Level 3-development requires teachers to reflect more deeply and explore their practice by examining the wider socio-cultural context they work in and illustrate their views by drawing on ‘expert’ knowledge. It is worth noting here that due to the informal environment this project took place in, most of them (with the exception of one teacher) did not consult the articles the researcher had uploaded on the issues that seemed to concern them. They even chose to ignore their colleague’s suggestion to discuss the articles she had read twice probably because just reading the articles would demand more time. Finally, the highest level of teacher development that is Level 4-development amounts to 3.3% only. In our model of analysis, Level 4-development requires teachers to show some change in their views or their practice. Although collaboration can be conducive to such changes to occur since teachers are exposed to a number of teaching ideas and practices, in our study participants mentioned very few aspects of their teaching that they would alter by incorporating a colleague’s idea. This is quite understandable since it is difficult to find hard evidence of change without observing teachers in the classroom most probably over a long period.

4.2.3. Collaboration in CEDEP

As regards the element of collaboration in CEDEP, the second most frequent type of development in our construct, there is a number of interesting findings which are worthy of our attention. First of all, teachers turned to their colleagues for advice or to discuss an issue they could not provide a satisfactory answer themselves very often. The issues teachers often seemed to be worried about relate to:

- class management and more specifically noise and misbehaviour during classes
- teaching of different skills such as reading and listening especially as regards new vocabulary learning
- workbook tasks and their correction
- learners’ attitude towards tests, grades and learning in general
- use of mother tongue and teacher’s talking time as well as
- helping weak learners.

Let us now present the collaboration aspect in CEDEP by exploring some characteristic excerpts from the teachers’ diary entries referring to the issue of noise and examine how teachers interact in their effort to find a solution to their problem. Teacher A raises the issue of noise in one of her first diaries:

‘I didn’t like, however, the noise in the classroom and I still don’t know how to manage my classes when it comes to carrying out writing tasks in class.’

Teacher C, while describing her lesson, refers to her students being noisy as a disadvantage:

‘Learners were enthusiastic about it, practiced forming questions, all contributed even in Greek, however, they made noise.’
and a little later turns to her colleagues for suggestions, expressing her views on the issue in a humorous tone:

‘Do you feel comfortable with noise during group tasks? Sometimes I think that other teachers or parents may think ‘lots of noise, lots of games and chants – no wonder why students get certificates from frontisteria’

In another diary entry, Teacher C brings up the issue of noise once again wishing to discuss a specific case of a student who disturbs the class. She has taken some action but she does not feel it is as effective as she would like it to have been:

‘[Teacher A] refers to one student who is non-existent in her English class. I have a similar case, a student who has major problems and disturbs a lot. I give him handouts to copy simple words to keep him busy. I ask him to help me collecting homework to make him feel useful. I also give him stickers if he manages not to make any noise. However, his presence in class is a constant source of disturbance. Any suggestions?’

Noise is also one of the reasons she avoids group work with her classes:

‘I usually avoid group work in my lessons, since I consider it noisier and less effective than individual or pair work. Noise and loss of control is something I detest during lessons.’

On the other hand, Teacher D commenting on the issues of noise and group work convincingly explains her views by drawing on relevant theory:

‘However, group work is tiring and most of the times noisy. I don’t really mind about what parents or co-teachers say about noise. Educational Psychologists say that children learn by doing and not by pathetically listening.’

In another diary entry, Teacher D grasps the opportunity to downplay the importance of noise in the classroom once again:

‘Since the computers aren’t connected in a network I had to save everything in a diskette before printing. Waiting makes students noisy and the teacher frustrated but it doesn’t really matter. Losing control of the order in the classroom isn’t always bad.’

From the CEDEP data we analysed it was apparent that collaboration between members of this group was manifested in a variety of ways. Teachers exposed themselves and their teaching practice to colleagues they had never met, exchanged comments, shared ideas and contributed substantially to discussions of fundamental issues in the EFL field. Although many teaching problems may have remained unresolved and teachers’ questions unanswered according to what the participants wrote and the researcher was able to observe, the sense of belonging to a group that shares the same interests and works in a similar context can be a catalyst for one’s self-induced professional development, especially in the working context of state school EFL teachers.
where professional development and support offered by the state has been limited. Finally, as Hargreaves (2001) and Lasky (2000) have also maintained, another advantage of collaboration, which was recorded in the teachers’ diaries in our study, is that collaboration with colleagues is another source of positive emotions. Teachers often appeared to be in need of reassurance as to whether their practices or beliefs are fairly acceptable and, despite recognising that there is no single correct approach or that an issue is too complex, they still chose to bring the topic up for discussion in the group as a way of freeing themselves of the ‘bout of guilt’, as they said, they were suffering from.

5. Implications of the study

The findings of TVQ, which were presented earlier, emphasise how important it is to exploit EFL teachers’ positive attitude towards teacher training whenever major or minor teacher training schemes are designed in order to have more effective practitioners. As the principle of one-size fits all does not apply to educational contexts, various options regarding content and modes of delivery should be available to teachers working all over Greece. A wide range of long-term teacher training schemes could be designed centrally by teacher training agencies. These schemes, which could be face-to-face training, distance mode training or a combination of both, should have clearly defined aims and their content could be adapted to meet local needs by school advisors so that overall coherence can be maintained. Moreover, it is of vital importance that components which raise EFL teachers’ awareness of their teaching practice, systematically enhance their reflective skills and critical thinking and promote their linguistic development be included in INSET courses. Finally, formal on-going evaluation processes should be applied at all levels of formal and non-formal INSET training and their results should be taken into account in order to improve these courses further.

As regards the findings of our research from CEDEP, it could be claimed that when EFL teachers collaborate with colleagues, share their electronic diaries and critically talk about them, they actively reflect on their practice, they rationalise their course of action, they understand the benefits and drawbacks of options available to them better and see themselves through the lens of others, which clearly boosts their professional confidence.

In addition, CEDEP encompasses all the characteristics of examples of good practice as these are described by the Commission of the European Communities (Kelly, et al., 2002) and can contribute to EFL teachers’ professional growth by enhancing teachers’ reflective skills and critical thinking, also promoting their linguistic development since diaries should be written in English and any relevant reading could be done in the target language. Further, CEDEP proves that exploiting the asynchronous ways of communication and working collaboratively with peers in distance mode offers EFL teachers as well as stakeholders such as school advisors, an effective, viable and most probably cheaper alternative to traditional and less successful approaches to teacher training. This approach can be applied to a wide range of teacher training contexts from initial training sessions in the form of practicum or induction courses, to school-based training or long-term teacher development programmes designed either locally by a group of self-motivated teachers under the guidance of a school advisor or more centrally by teacher development policy makers. It can also be designed to focus on specific problem areas depending on the particular teachers’ needs. What is more, CEDEP is particularly suitable for the geographical uniqueness of Greece where any face-
to-face form of teacher training requires transportation of either teachers or advisors or both to more centrally located areas.

A further benefit of this approach, as with all asynchronous modes of communication, is that it lets the participants decide when and where they will carry out the writing task the project requires. Furthermore, belonging to a learning community which shares similar experiences is a great advantage which offers unique opportunities of professional development, especially in the working context of primary school EFL teachers where there is usually only one EFL teacher for every two or sometimes even more schools and as a result communication with colleagues of the same field is limited either to personal acquaintances or to scant teacher training meetings organised by school advisors.

Last but certainly not least, it gives teachers a sense of independence and a feeling of confidence and security as they are solely responsible for what they reveal about their teaching practice. As a consequence, this form of teacher development can also function as a gradual transition stage from self-appraisal to other-appraisal, which (other-appraisal) has faced widespread opposition for years not because teachers are against being appraised but mainly because, when it was applied many decades ago, neither the criteria used were clearly defined, nor the process applied was objective or fair to all. Through this appraisal process, more experienced and highly qualified EFL teachers could be offered opportunities of career advancement such as serve as mentors or INSET co-ordinators. This approach would acknowledge their expertise in practice and would be very likely to discourage them from early retirement or change of career.

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Educational paradox: The hidden obstacles to the integration of mobile phones in the language classroom

Education paradox: Ta krymména empopódia sthn evousmátosi ton kinyntón theléfwnwn méssa sthn xenóglwssí tásē

Karen Woodman

This 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.

Key words: mlearning, elearning, mobile phones in ESL, teacher expectations, Facebook, social networking
1. Introduction

While the uptake of computers has been fully embraced by the educational establishment over the last two decades, the acceptance of mobile technologies – especially related to the use of 3G or 4G mobile phones in the classroom – may not follow a similar path. Despite the increasingly widespread availability of mobile phones with internet capabilities (e.g., ‘smart phones’), which could theoretically be used to supplement or even replace large scale infrastructure costs of computer labs (e.g., Ali & Irvine, 2009; Buck et al., 2013; Godwin-Jones, 2010, 2011), the willingness amongst teachers and administrators to consider the use of these devices in the classroom may be at odds with their general receptivity towards technology.

This study explores the perceptions about the use of mobile phones in the language classroom by pre- and in-service language teachers from six countries (including Greece, Australia, China, the Philippines, Saudi Arabia and Korea) in Master of Education programs, via online discussions within a specially created Facebook page. The study reported in this paper is part of a larger project which examines the use of the well-known social networking site, Facebook (FB), for telecollaboration in language teacher education to identify different types of users, and evaluate the effectiveness of the use of scenario discussion questions for facilitating formal and informal discussions to develop analytic skills. The larger study builds on research by Woodman (2004, 2005, 2009) and Woodman and Kourtis-Kazoullis (2007) exploring telecollaboration and the use of online discussions between graduate students in an online M.A (Applied Linguistics) program based in Australia and students in the graduate education program at a regional university in Greece using WebCT.

1.1 Background

While there has been an increasing focus in the literature on mLearning, or the use of mobile devices such as mobile phones for teaching and learning (Ali & Irvine, 2009), the majority of the studies appear to make assumptions about the relative ease in which such innovations could be incorporated into the classroom (Buck et al., 2013; Kukulska-Hulme, 2009; Pettit & Kukulska, 2007; Schmiedl et al., 2010; Scornavacca & Marshall, 2009). In fact, most studies seem to assume an innate good in the use of such technologies, and focus more on how specific technologies and/or specific uses or apps can be used with different populations (Buck et al., 2013; Schmiedl et al., 2010). However, only a few studies have considered psychological, pedagogical and/or administrative barriers to the use of such technologies, especially mobile phones, in schools and in the minds of teachers (Clayson & Haley, 2012; Kafyulilo, 2012; Keengwe et al., 2012; Roblyer et al., 2010; Shudong & Higgins, 2006; Tindell & Bohlander, 2011; Wei et al., 2012; Williams et al., 2011). Specifically, some evidence suggests that many schools still ban the use of mobile phones in the classroom (Kafyulilo, 2012), while, in some cases, encouraging the use of other mobile devices such as Ipads, which, arguably have virtually the same functionality. In addition, since much of the research involves older students (e.g., college or high school students), and often occurs in developed countries (Ali & Irvine, 2009), the degree to which findings can be generalized is of concern.
To date, little research has explored the views of teachers or the actual educational contexts in which they teach on the use of mobile phones in the classroom (Kafyulilo, 2012). However, some research that has looked at these issues may raise some concerns, including evidence that texting during classes negatively impacts learning and distracts others students, and issues such as students using phones for sexting or other inappropriate activities (Clayson & Haley, 2012; Kafyulilo, 2012; Kuznekoff & Titsworth, 2013; Tindell & Bohlander, 2012; Williams et al., 2011; Wei et al., 2012). Furthermore, Kafyulilo (2012) found differences between students, pre-service teachers, in-service teachers, and college instructors in terms of perceptions towards the use of mobile phones in the classroom. Despite the fact that all teachers and instructors had mobile phones (or access to them), the majority of in-service teachers were against classroom use. By contrast, the students, pre-service teachers and college instructors were in favour. The reasons the in-service teachers were against the use are interesting: concerns about prohibitions about teachers communicating with students by phone, and bans on use of phones in schools (e.g., administrative issues); lack of knowledge about how to use them in class (e.g., pedagogical issues); concerns about students using phones for flirting or non-academic purposes (e.g., classroom management); and concerns about students using phones to cheat or plagiarize (e.g. class management). These types of findings contradict the general implication in the mLearning literature that use of mobile phones is (1) inherently good and (2) will be easily integrated into the school context (Buck et al., 2013). This study examines some of these issues, based on some unexpected responses in a larger study in which graduate students (mostly in-service teachers) from two different universities discussed issues related to the use of technology in the language classroom on a shared Facebook page. Of the discussion questions posted, there were three which related to the use of mobile phones. It is these three questions which are the focus of this paper.

2. The Study

In this study, the social networking site, Facebook, was chosen as the virtual environment for the telecollaboration as it was identified as a site that virtually all students could access easily (e.g., without having to navigate different universities’ logon systems, or go through complex access processes). It was also identified as a site with which many students would have some familiarity due to the popularity of the use of Facebook for personal contacts (Hew, 2011). It was believed that previous familiarity could minimize the possible interference of the technology itself on interactions (e.g., the navigation of the system would be less problematic than having to learn a new system). In addition, based on the findings of Woodman and Kazoullis (2007), specific tasks were designed to encourage interaction between the two groups of participants, and to engage discussion on a specific topic (e.g., ICT in the language teaching classroom). Research by Woodman and Kazoullis (2007) and others (e.g., Belz, 2002) using telecollaboration has indicated that important factors in successful telecollaborations included ease of use and access, familiarity with the platform or site, and providing targeted discussion questions, often involving self-reflection and application to students’ own experience, for participants to share with their classmates while online (e.g., to facilitate and engage social interaction). It was shown that these questions should create a purpose for interaction between students who do not know each other, by encouraging them to share similarities and differences in perceptions.
about a shared experience via social networking (e.g., in this case, the use of technology in their classrooms). The online discussions were frank and open, and it was found that the participants responded in their identities as in-service teachers (e.g., professional identities), reflecting on their own professional practice and experiences, rather than in their identities as graduate students (e.g., where they may respond in terms of hypothetical situations).

Included in the discussion topics was the use of mobile phones in teaching languages. For example, one Discussion Question was “Here’s a new challenge for you: create a language teaching task or activity that could be done with the mobile phones available to your students (e.g., in your teaching context)”. The responses to this question, and two subsequent related questions are explored in this paper, based on the framework in Kafyulilo (2012).

2.1 Purpose

The purpose of this study was to examine the responses to specific questions regarding the perceptions of the use of mobile phones in the classroom language teachers enrolled in Masters of Education programs in Australia and Greece, who were from diverse cultural and linguistic backgrounds, providing the opportunity for international comparisons. During the period of the study, both groups of students were enrolled in courses which were specifically focussed on the use of technology for language teaching.

2.2 Method

A Facebook page was specially created for the project, and within the page a specific discussion group called “Scenario Discussions” was created. Weekly Scenario Questions [SQ] were posted to stimulate discussion on issues in the use of technology for teaching languages which could motivate participants in different countries to use social networking to explore shared experiences: to discuss, share and interact with each other. Because participants shared a common profession (e.g., as language teachers), but did not know each other ‘offline’, issues were included which might be common to teachers in different countries such as access and use of technology in the classroom, and problem-solving via discussion of real-life issues facing teachers in different countries. Due to privacy concerns, access to both the Facebook page and the specific “Scenario Discussion” group within the Facebook page were controlled by the authors (who were also the course instructors), so that only participants in the study could access and participate in activities. Approximately once a week, a new “Discussion Question” [DQ] was posted and participants were invited to comment. All participants had 24/7 access to the site, and they were therefore able to participate at their convenience. The study ran for approx. three months, which included the academic semesters of both institutions.

2.3 Subjects

Participants in the larger study included nineteen (19) pre- and in-service teachers studying in Masters of Education in Australia and Greece, and their two (2) academic lecturers. Twelve (12) of the students were studying in Greece, and seven (7) were studying at the
Australian university. While all of the participants from Greece were ethnically Greek, the ‘Australian’ group included two students from China, one student from Malaysia, one student from the Philippines, one student for Korea, one student from Saudi Arabia, and one Australian student. In total, there were five (5) male participants and sixteen (16) female participants.

Of this larger cohort, six (6) participants contributed to the discussions about the use of mobile phones. They were from Australia (1), the Philippines (1), South Korea (1), and Greece (2). All were female.

2.4 Analysis

Data in the larger study was analyzed in two ways. First, overall tendencies were observed in terms of number of participants, number and types of postings, number and types of postings/participant, etc. (Ali & Irvine, 2009; Hew, 2011). Second, ‘target’ postings – or those which triggered responses from participants – were identified and classified into four main categories: discussion questions, online questionnaires, resources, and other. In the study reported here, postings were further explored in terms of content relating to teacher perceptions of the use of mobile phones in the classrooms.

There were three main DQ questions which were identified as relevant to the issue of use of mobile phones in language teaching (presented as posted):

1. “Here’s a new challenge for you: create a language teaching task or activity that could be done with the mobile phones available to your students (e.g., in your teaching context)”
2. “Thanks for everyone who has commented on the use of mobile phones. We know that some schools don’t currently allow student to use them in class. However, mobile phones are a technology that is one of the most democratic (e.g., most students have them), perhaps we as teachers should be thinking about how best to make sure of this access – either in –class OR for homework or practice outside of class. For example, think about how your students use their mobile phones – could they learn vocab by texting? Practicing speaking using skype?download grammar program apps?”
3. “Can you (or anyone else) think of an actual task/activity that could involve students smsging each other (e.g., icebreaker questions where they need to ‘find someone who’ by sms in English only?”

3. Results and Discussion

The responses were analyzed based three main categories: number of responses, whether responses were positively or negatively oriented towards mobile phones in the classroom, and identification on any specific examples of reasons for use/non-use of phones (Ali & Irvine, 2009; Hum et al., 2011).

All quotes are provided as written by participants, without correction.
3.1 Types of DQs and numbers of responses

In the larger study, activities were categorized in terms of type of activity (e.g., introductions, discussion question, online questionnaire, or other), whether it was student or instructor-initiated, and the number of respondents. These general categories were also used in this study. The Discussion Questions (DQs) related to the use of mobile phones are summarized in the Table 1.

All of the DQs related to mobile phone use were posted by the instructors, although some resources were posted by a student. In general, the DQs were designed to encourage participants from the different programs to compare their experiences in different countries and teaching situations, in terms of the use of technology in the language classroom. In the larger study, the DQs which received the most individual responses included: “What kind of equipment does your schools provide, in order to support teaching ICT” (n=10); “In your opinion, what are the key issues in your country’s teaching context related to CALL or use of technology in teaching? Why?” (n=9); “What learning environments do you prefer” (n=8); and “Create a language learning task that you could do with a mobile phone” (n=7). In other words, the most popular discussion questions were those which encouraged and allowed participants to draw on their own experiences, and to share their personal experiences in teaching with others who shared this identity and interest.

<table>
<thead>
<tr>
<th>Question</th>
<th>Type</th>
<th>Student initiated</th>
<th>Instructor initiated</th>
<th>Number of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Create a language teaching task or activity that you could do with the mobile phones available to your students (e.g., in your teaching context)</td>
<td>Discussion question</td>
<td>X</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>How could we make use of (mobile access) – either in class or for homework outside of class</td>
<td>Discussion question</td>
<td>X</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>In your country or teaching context, in your opinion, what is access to CMC or other technologies for (1) schools, (2) your students, (3) other groups? Consider access in terms of access to the internet via computers, mobile technologies, internet cafes, etc. How could you use these different types of access for your teaching and learning for in-class work and/or extracurricular work? How could you use social networking for teaching language?</td>
<td>Discussion question</td>
<td>X</td>
<td>4</td>
<td></td>
</tr>
</tbody>
</table>

Table 1
3.2 Nice idea, but...

There were seven responses to the question: “Here’s a new challenge for you: create a language teaching task or activity that could be done with the mobile phones available to your students (e.g., in your teaching context)”, which made it the fourth highest response rate by DQ in the larger study. However, the response pattern was quite different from other items. Rather than responding to the question as requested (e.g., coming up with ideas for ideas for using mobile phones), the majority of postings (n=5) related to other issues with the use of mobile phones in the classroom. Most indicated there would be problems using mobile phones in the classroom, including institutional restrictions, age-related limitations, access, limited technologies, personal and privacy concerns. These responses suggest that (1) the topic was of interest to many teachers, so they had an opinion of sufficient strength that they were willing to participate in the conversation, but (2) arguably also demonstrates a level of resistance to the content of the DQ (e.g., the request to suggest teaching activities). The latter behaviour could reflect an unwillingness to engage in hypothetical activities (e.g., trying to think of teaching ideas that they could not, in reality, actually use in their teaching contexts).

Although unexpected in the context of the larger study, where participants normally contributed teaching ideas quite readily, these responses are consistent with the findings of Kafyulilo (2012) and others that in-service teachers, who were otherwise quite positive towards the use of technology in their classes, tended to be hesitant or negative towards using mobile phones in their teaching, due to administrative, pedagogical, and/or classroom management concerns.

3.2.1 Administrative concerns

The main reason cited by teachers for not using mobile phones for teaching was institutional restrictions on the use of phones in the classroom. For example, KH states “mobile phones are probably not an age-appropriate CALL device for my teaching context [in Australia]. Our students are not allowed to use mobile phones during school hours.” Such restrictions were also cited by teachers from the Philippines [“in our school mobile phones are not allowed in the classroom for regular classes, LQ”], South Korea [“only two or three students in a class have a cell phone and they are only allowed to use mobiel [sic] phones with their parents or in the emergency situation, SK], and Greece [“In our school, normally forbidden to use mobile in classrooms”, EP]. These responses are interesting in that they not only indicate that many teachers are aware of institutional restrictions of phone use, but also because they strongly suggest these kinds of restrictions are widespread internationally (Kafyulilo, 2012). The international nature of the response should be of concern to advocates of mLearning, since such administrative restrictions at the school level (minimally) may be onerous for classroom teachers to overcome on their own.

Another related issue for most of the participants was restricted access to mobile phones in the classroom. For example, SK notes that “only two or three students in a class have a cell phone and they are only allowed to use mobiel [sic] phones with their parents or in the emergency situation” [South Korea]. These concerns included identifying a lack of phones amongst the students in general, and lack of access in the class setting, as hindrances to use for teaching purposes.
Both KH from Australia and LQ from the Philippines agree that phones are not allowed in the classroom, and in fact may need to be left in the office.

KH: Our students are not allowed to use mobile phones during school hours. They have to leave them at the office when they arrive and pick them up before they leave. [Australia]

LQ: In our school mobile phones are not allowed in the classroom for regular classes [The Philippines]

A similar restriction is cited for Greek schools, although as EP humourously notes,

in our school, normally forbidden [sic] to use mobile in classrooms. But just because we are Greeks, we ignore that. So you can see on facebook photos from the classroom with the teacher, etc. Mobile phones are strictly prohibited only during the final examinations in June. Only then the students must leave them at the office when they arrive and pick them up before they leave. [Greece]

Interestingly, EP is the only person to specifically identify cheating as a potential reason for banning phones, although this concern has been cited by others (e.g., Ali & Irvine, 2009). As noted previously, clearly any school-based restrictions on students bringing and/or using mobile phones in the classroom are real impediments to any pedagogical use by teachers, and teachers ‘resistance’ to discussing possible uses should be considered within this reality (e.g., not as a resistance to change, etc.) (Kafyulilo, 2012). These results, along with others such as Kafyulilo (2012), suggest limitations to current research with pilot projects using specific technologies in special contexts, in which there is an implicit assumption that successful outcomes on a class or program level would necessarily translate into a widespread uptake, including overcoming any administrative barriers (Buck et al., 2013; Kukulska-Hulme, 2009; Pettit & Kukulska, 2007; Schmiedl et al., 2010; Scornavacca & Marshall, 2009).

### 3.2.2 Age-related restrictions

Some of the participants also identified cohort specific issues in their responses. Identifying the age of the students as influencing the types of phones, and appropriateness of access, KH states “mobile phones are probably not an age-appropriate CALL device for my teaching context [with primary students]”, and SK agrees, noting “it would be possible for middle school or high school students but not for primary school students in Korea”. These responses are important in terms of assumptions concerning the appropriateness of different technologies in m Learning: age of students, access to relevant technologies in different countries, types of activities, and cost of access. Much of the research on mobile phone use in education focusses more on older students, especially on college or university students (Ali & Irvine, 2009).
3.2.3 Limited technology

In general, there was little evidence for a digital divide as a reason for not using mobile phones in this group of respondents. Most teachers indicated their students did have mobile phones, although AG believed “kids usually have old devices which only support text messages and voice calls” [Greece]. These responses are consistent with the literature in mLearning which has argued, in part, for the use of mobile phones for teaching and learning because of the widespread access in both developed and developing countries (Kafyulilo, 2012; Keenwe et al., 2012).

3.2.4 Other issues

Other issues raised included privacy issues raised by KH, who states:

I believe teachers have a responsibility to consider the social and ethical implications of encouraging younger students to use mobile phones. One example is privacy issues related to exchanging phone numbers with the class, and ensuring that they know not to pass those phone numbers on to anyone outside the class. Another would be responsible use of their classmates phone numbers, like appropriate times of day to phone or text and appropriate conversations. [Australia]

And CM who just comments “I am not sure that mobile phones can really help education. I have a lot of reservations about this issue....” [Greece]. Both of these issues are interesting. KH raises some specific concerns about how use of mobile phones could be addressed. However, CM’s more general concerns are probably representative of many teachers, who do not see mobile phones (even smart phones) in the same light as computers (or tablets) for educational purposes. This general unease should be of interest to mLearning advocates since such non-specific ambiguity around mLearning may translate into lack of interest (or passive resistance) in incorporating the technology into the classroom

3.3 Silence speaks volumes...

In an attempt to encourage participants to explore the topic of the use of mobile phones in the classroom despite the general negative reception of the first question, a follow-up comment/question was posted by one of the instructors:

Discussion Question 2: Thanks for everyone who has commented on the use of mobile phones. We know that some schools don’t currently allow student to use them in class. However, mobile phones are a technology that is one of the most democratic (e.g., most students have them), perhaps we as teachers should be thinking about how best to make sure of this access – either in –class OR for homework or practice outside of class. For example, think about how your students use their mobile phones – could they learn vocab by texting? Practicing speaking using skype?download grammar program apps?
There was only one response to this posting, by SK, who reflected on her own learning experiences with mobile learning rather than directly responding to the question. Based on her realization about her own experience, she suggested a possible activity for her students.

SK: I remember that I used to play English word games on my mobile phone. It was pretty fun and helpful to remember [sic] vocab. Also I guess if we can ask them to send text messages only in English, it would help them improve their writing skills especially in EFL context. Since I came to AU, I had to use only English to send text massage [sic] and I think it was helpful for me to improve simple daily English writing skills. [South Korea]

Interesting, SK was also one of the few students to make suggestions earlier as well about possible extracurricular learning opportunities for her students in South Korea.

In response, the instructor tried again to get more responses:

QUTA: Good point – can you (or anyone else) think of an actual task/activity that could involve students messaging each other (e.g., icebreaker questions where they need to ‘find someone who’ by text in English only? [No direct answers]

However, there were no direct responses, although one student, LQ, posted a link to a website called “Six things” and a page on “Six classroom activities with mobile cell phones [http://sixthings.net/2009/09/25/six-classroom-activities-with-mobilecell-phones/]” which at least one student KH investigated, commenting:

Hey LQ, these are great ideas. I can even do many of them in primary school without the children actually having to use the phones. [my emphasis] And it would capitalize on their fascination with phones and provide opportunities to discuss appropriate use of CMC technologies.

The lack of response to the follow-up DQs, or indirect response in the case of SK, may be interpreted in a number of ways. First, the responses suggest a degree of resistance to the general idea of the use of mobile phones in the classroom. That is, the participants have decided the issues isn’t worth discussing in any more detail (e.g., coming up with teaching ideas) since it isn’t feasible in their teaching contexts anyway. Second, even when there was a response, it was self-reflective, where LQ is coming to realise that she actually has used her phone for educational purposes herself, and that she could also do this with her students (extracurricularly) and provides her colleagues with some resources for pursuing this possibility themselves. Ironically, while KH indicates that she will probably use LQ’s resource, it will be to talk about mobile phones, not actually use them. Although this may just be an acceptance of the institutional restrictions, and an attempt to subvert them.

Unspoken in this work is the strange double standard that seems to exist in the educational context, where often use of tablets (e.g., ipads, etc) and laptop computers are encouraged, but slightly smaller devices with very similar functionality – smart phones – are banned. Given that most people use their smart phones more for texting and internet access rather
than calling, the similarities between the devices which are abitarily banned vs encouraged is even more bizarre.

4. Conclusions

This 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 real, but often invisible, barriers exist in the use of mobile phones in the classroom in terms of actual administrative restrictions on the use of mobile phones in the classrooms, the types of phones available to students of different ages, and lack of familiarity with educational activities using phones, in a number of countries, including Australia, Greece, South Korea and the Philippines. In addition, there appears to be a general perception amongst classroom teachers that mobile phones are not for ‘educational’ purposes.

Given the potential for increasing access to internet resources through use of mobile and smartphone in areas where computer access may be restricted, the results of this study suggest that more research is necessary to identify administrative and individual factors which may restrict use of mLearning in different countries and teaching contexts, and a recognition that addressing these issues may not be easy. Key strategies may include emphasizing the positive benefits of increasing student access to internet resources via smart phones, helping teachers develop classroom management strategies to minimize ‘bad smart phone’ behaviours, and support teachers to identify appropriate, useful and relevant teaching activities using mobile phones in the classroom and for extracurricular learning.

References


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Exploring the use of Wikis in developing students’ writing skills in the EFL classroom

Myrsini KONTOGEORGI

This paper explores the integration of wiki technology in the writing instruction by means of a student wiki journal. The research, conducted in a private language institute in Greece with young participants’ language levels ranging from A1 to B2 according to CEFR (2001), revolves around four axes: motivation, collaboration, electronic literacies and process writing. The purpose is to investigate the extent to which the aforementioned factors can substantially contribute to improving learners’ writing skills. The findings indicate that, in terms of motivation and electronic literacies, the wiki journal can promote “pride of authorship” to the participants actively involved and facilitate collaboration, teacher and peer feedback. 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. Perhaps the most prevalent downside was related to time management issues both for learners and the instructor, a problem that may be easily tackled in the near future with the further development of electronic literacies.
1. Introduction

The rapid growth and dissemination of digital technology over the last few decades have affected all aspects of life, and education constitutes no exception. From a very early age modern students can operate the computer skillfully, surf the Internet, play computer games or chat on social networks. Interactive whiteboards have earned their place in the EFL classroom and e-Books are expected to replace traditional, printed books. It seems that paper means nothing to the newest generation of “digital natives”, as Prensky (2001) successfully describes modern students, i.e., the native speakers of the digital language of computers, cell phones and the Internet. On the other hand, modern teachers, having been educated the traditional way, are striving to attract students’ attention, develop their critical thinking and enhance motivation, seeking for innovative ways to reach their students and build a rapport, like “digital immigrants”, who can learn how to speak the digital language but will never speak it like a native user.

In an attempt to enhance students’ motivation and critical thinking in reflective and collaborative writing, as well as practice e-literacies to develop their writing skills, the present research paper will deal with a case study of the creation of a wiki-based student journal by thirty-five Greek students studying English at a private language institute, their levels ranging from A1 to B2 (CEFR, 2001). Although wiki implementation has been researched before (Georgopoulou, 2012, Mpakola, 2012, Velissaridis, I., 2012), it has mainly involved higher education and, to the researcher’s knowledge, blogs seem to have been favored for this purpose so far (Kontolati, 2011).
2. Implementing Web 2.0 Tools in the Classroom

The advent of Web 2.0 marked a turning point for the web since, contrary to its predecessor Web 1.0, which limited users to passive viewing, it included the growth of social networks, bi-directional communication, various ‘glue’ technologies, and significant diversity in content types (Comode & Krishnamurthy, 2008). In fact, their substantive discrepancies are based on the fact that Web 2.0 tools offer all users the possibility not only to collaborate and interact in a social dialogue, but also build a virtual community. Novel tools are constantly emerging, extending opportunities for the teachers who are to implement them in the classroom, with a view to enhancing learning potential and developing students’ digital literacy, an indispensable skill for the twenty first century. In other words, by using Web 2.0 tools, students can turn from mere viewers to dynamic website designers, sharing what they learn with their peers, not only in their classroom but all over the world. More specifically, language learners can be exposed to authentic material (authenticity), (Harel & Papert, 1991), become more motivated (motivation) (Fountain, 2005, Lamb, 2004) and creative (creativity), develop their critical thinking and become more confident, taking charge of their own learning (learner-centered learning/ learner autonomy). Modern students can build their own networks and develop relationships with real people (socialization), and they can share what they create and learn from each other (sharing & collaboration) (Peachey, n.d.). (Fig. 1)

![Figure 1: Basic features of Web 2.0 Tools (adapted from Peachey, n.d.)](image)

2.1 Wikis: Features and Educational Potential

Cunningham used the word wiki to name the collaborative tool he developed for use on the Internet in 1994. Although wikis have been in existence for more than a decade and in spite of their considerable potential, it is only recently that they started to gain the recognition they deserve compared to the popularity of blogs (Chao, 2007, Evans, 2006, Schaffert, Bischof, et al.,
2006). Before beginning to recount the salient benefits of integrating wikis in foreign language learning, a definition should be attempted. A wiki (from the Hawaiian wiki, to hurry, swift) is a collaborative website, the content of which can be edited by anyone who has access to it. Perhaps the best example of wikis in action today are ‘Wikipedia’, the free encyclopedia with more than 18 million articles.

Warschauer (2010) maintains that the potential of wikis for teaching and learning is hinted at by Cunningham who commented, “The blogosphere is a community that might produce a work, whereas a wiki is a work that might produce a community.” Cunningham’s comment highlights the collaborative character a wiki has (Godwin-Jones, 2003), which stands out as its most important feature. Wikis constitute the epitome of learner-centred learning, since they embody the personal empowerment and communication between learners in many respects, and constitute an environment where, as users, learners and teachers have the same power and flexibility (Desilets & Paquet, 2005). In the same respect, wikis can promote learner autonomy since they allow room for asynchronous interaction or teaching/learning to take place without the constraints of the classroom. That means that knowledge is at the learners’ disposal without the constraints of time and place. Likewise, the latter could also encourage distance learning (Campbell & Ellingson, 2010) and, in a sense, lifelong learning.

Although wikis can be used as a source of information and knowledge by educators or educational institutions (Ferris, Wilder, n.d.), this is a rather passive manner to exploit the specific versatile Web 2.0 tool. The most powerful way to use them is to familiarise learners with wiki technology and engage them in constructive and collaborative learning by means of collaborative authoring, the benefits of which have been stressed by a plethora of theorists (Hampel, Selke, & Vitt, 2005, Schaffert, Bischof, et al., 2006). According to Parker and Chao (2007), social software offers a variety of unique and powerful information sharing and collaboration features, acting as cognitive reflection and amplification tools, and aiding in the construction of meaning through the self-design of knowledge databases (Jonassen, Peck & Wilson, 1999). Wikis actively involve learners in their own construction of knowledge, providing them with opportunities to: interact with each other in order to clarify and share ideas; seek assistance; negotiate problems; discuss solutions; engage in dialogue through posts; and share information (Boulos, Maramba & Wheeler, 2006). In fact, social constructivists believe that we learn by social and communal activities. Meaning is shaped and knowledge is constructed through discussion with peers and teachers and through reflection (Higgs & McCarthy, 2005). Therefore, wikis enhance asynchronous communication and cooperative learning among students and promotes collaboration rather than antagonism (De Pedro et al., 2006). The practice of participating in wikis in and social software more generally could potentially provide a structure supporting a community of practice model of learning as individuals come together and develop a repertoire of shared practices, bringing new experiences to the group and facilitating learning through the group’s existing practices (Grant, 2006).

Another key feature of wikis is authenticity. In the past, EFL teachers turned to the printed press in order to provide learners with some limited samples of authentic, language, which was not only costly but also inconvenient, not to say extremely difficult, especially for those living in remote areas where the foreign press is not easy to find. Nowadays, wiki technology makes it possible for learners not only to publish their own work and make it public, but also to include a
variety of hyperlinks and share the final product with their friends. It offers students a realistic purpose with a feasible outcome. For example, the fact that students can publish their work on the Internet promotes “pride of authorship” (Fountain, 2005). It is highly motivating for students to have the ability to develop Web content collaboratively and to upload their own work on a website which is open to a genuine audience (Alexander, 2006). At the same time, their exposure to authentic texts in a non-linear way, provided by hypertext technology, is extremely beneficial.

Due to their very low technological barriers yet very rich and flexible functionality, wikis afford the opportunity to offer collaborative, constructive learning more extensively in our educational environments (McMullin, 2005). Wikis have immense potential as learning tools due to the fact that the technology of wikis is simple and user friendly. Basic internet skills and some command of a simple word processor (e.g. Office Word) is all learners need in order to be able to edit texts in wikis. There is no HTML to learn or any programming interface to master. In addition to this, YouTube includes a variety of videos that can teach anyone how to use wikis in very simple steps. Its inventor, Ward Cunningham, called it “the simplest online database that could possibly work.” Web 2.0 tools such as Wikis afford the added advantage of reducing the technical skill required to use their features. They allow users to focus on the information exchange and collaborative tasks themselves without the distraction of a difficult technological environment (Kirkpatrick, 2006). Furthermore, using wikis in the EFL classroom is cost effective.

Despite the fact that no specialized computer knowledge is required in order to create and operate a wiki, without doubt their implementation in the foreign language classroom assists learners to develop electronic literacies. Literacy is no longer singular and print bound; instead the iconic and digital demands of the 21st century have opened up literacies that require transversals across print and non-print based formats (Lankshear & Knobel, 2003). As Leu states, literacy is no longer an end-product but a continuous process (2001). The content of literacy has undoubtedly been differentiated and modern educators seek ways to adjust to the new learning reality and prepare students to respond to future challenges (Brown, Bryan, & Brown, 2005). The use of wikis by language learners can provide a strong foundation in many different types of media literacies such as technology, information, digital and visual literacy. According to Ba, Tally & Tsikalas (2002 in Calogerakou & Vlachos, 2011:101), digital literacy is viewed as a set of habits students use in their interaction with information technologies for learning, work and fun. Some of these habits are: (a) communication literacy, i.e., how to use email, blogs and other tools to talk to peers and adults; and (b) web literacy, i.e., how they use the web to find and judge information and their skill at creating web-based material themselves.

All of the aforementioned features of wikis render them a powerful tool in the hands of modern educators and can only lead to boost motivation levels of ‘digital natives’. To start with, wiki technology is not only easy to use, even for young learners, but also offers an impressive outcome through the combination of image, video and hyperlinks. According to Cohen & Riel (1989) online publication can motivate learners and lead them to write better as it can cultivate learners’ “pride of authorship” (Fountain, 2005) and encourage them to practice their writing skills in an authentic, fully contextualised environment (Harel & Papert, 1991), in collaboration with their classmates in and outside the classroom (Parker & Chao, 2007). Previous research on the use of wikis for collaborative writing assignments in second language learning suggests that
participants increase their quantity of writing, develop more confidence in their writing, and find such assignments motivating (Kovacic, Bubas & Zlatovic, 2007, Mak & Coniam, 2008). Recent research in Greece has also shown that wikis can highly motivate students (Mpakola, 2012) regardless of age (Georgopoulou, 2012).

2.2 Wikis in Writing Instruction

Perhaps the most common pedagogical application of wikis is supporting writing instruction (Lamb, 2004). Writing is a much neglected skill in foreign language learning (White and Arndt, 1991), mostly limited to homework assignments and to tasks that involve marking. Traditional, text-based methods which place emphasis on the centrality of form only seem to discourage learners, especially weaker ones, who conveniently resort to the “lack of ideas” excuse. Writing is not a spontaneous skill or acquired easily; in fact, it is often viewed as the most difficult skill to master (Nunan, 1999). The use of wikis in developing learners’ writing skills has a wide range of possibilities to offer to all learning styles (Gardner, 1983) in terms of unlimited editing and constant updating. This ability increases motivation as it frees students from error-making anxiety and gives them a realistic purpose (Slauoti & Bouboureka, 2005). Using a wiki as a writing tool maximizes the advantages of reflection, reviewing, publication, and observing cumulative written results as they unfold (Fountain, 2005).

2.2.1 Process Writing

In process writing, the focus moves from the end product to the actual process of writing, and the purpose is to develop fluency, rather than accuracy (Hedge, 1988, White & Arndt, 1991). More specifically, the writing process is seen as a cyclical, recursive process, divided into stages that learners need to go through again and again before they reach the completion of their final product. These stages involve generating ideas, drafting, revising, and editing. White and Arndt (1991) suggest that brainstorming should be unhindered and non-critical in order to promote productivity and creativity. Brainstorming should be used to help students identify purpose and audience, develop the topic and organize ideas.

After the initial stage of brainstorming, students gather their ideas and write the first draft. Revising is part of the writing process which entails assessing what has already been written and is an important source of learning (Hedge, 2005; Sommers,1982 in Zamel, 1985). Editing will aid students in future writing as they will have the opportunity to receive feedback while the experience is still ‘fresh in the mind’ (Hedge, 2005). Teachers should teach students how to proofread and mentally correct their errors. The teacher can also encourage peer feedback as part of process writing, having learners spot and correct each other’s errors. By providing students with the opportunity to correct and provide feedback on their classmates’ texts, they are learning by doing and as Hedge points out (2005), ‘accuracy work which is comparatively spontaneous [is] certainly more meaningful and motivating’.

2.2.2 Student Journaling

Journaling as a pedagogical tool for learning has been used in the classroom for the last thirty years. It is an effective tool for checking students’ understanding of core concepts, promoting
reflection on connections between theory and practice, enhancing insight and promoting critical thinking. Thus, it has been integrated into different academic and professional courses (King, LaRocco, 2006).

Hiemstra (2001) notes that there are a number of potential benefits for learners in maintaining some type of journal. Some of them include enhanced intellectual growth, personal development and the ability to examine new knowledge in critical ways. In an EFL context, the creation of a student journal can provide substantial impetus for learners to use L2 in a written mode and further motivate them, as there is a realistic goal and a real audience to write for.

According to Phipps (2005:64), electronic Journaling or e-Journaling is one teaching strategy that has been successfully implemented in the high-tech environment of online education. He maintains that ‘Word-processing technology is more accommodating than paper and pencil or the typewriter when making journal entries because of the ease of making corrections and additions and rearranging portions of text. There is also the added value of learning or practicing the related technical skills of typing, formatting, and editing. Composing journal entries electronically increases time on task not only by making writing more efficient but also by making entries easier to read. e-journaling allows students to participate in the process of learning through critical reflection on the content and synthesis of new information.

In particular, a wiki-based e-journal can prove to be an invaluable tool for fostering learners’ critical thinking as well as reflective and collaborative writing. Although traditionally e-journaling has been mainly associated with blogs, wikis have an unexploited so far potential to this end that can amaze educators. Apart from the typical Web 2.0 tools characteristics that advocate their adoption (easy-to-use, state-of-the art technology with hyperlinks, asynchronous interaction), wikis’ topic-centred design and formality of language renders them most appropriate for e-journaling and development of writing skills.

3. Research Design

3.1 The Research Context

The context in which the particular research was conducted is a private institute of foreign languages in a suburb of Athens, which mainly deals with general purpose classes, such as preparatory courses for FCE, ECCE, ECPE, IELTS and others. With regard to the facilities, classrooms are equipped with an Interactive Whiteboard System (IWB), but there is an absence of a fully equipped computer lab that would further assist the present research. Instead, the researcher has had to make use of the classroom computer and the projector for the IWB as well as a netbook and a laptop.

Four different groups of students participated in the wiki research, with levels ranging from A1 to B2 and ages from 11 to 15. All the students have been experiencing a teaching situation in the outer Kachravian circle (Kachru, 1985), that is English is the second language they are learning. Students attending the classes mostly come from middle-class families with an average economic and educational background. Both students and their parents have a positive attitude towards the institute, the teachers and their practices. However, although parents are
interested in their children learning one or two foreign languages for communication purposes, their main aspiration is the acquisition of a language certificate which in Greece is considered a prerequisite that will ensure better employment opportunities in the future.

In this respect, the curriculum is mainly exam-based and focused on tests of linguistic competency administered by British or American Universities such as Cambridge or Michigan. Both the language examinations and the textbooks available in commerce for foreign language institutes, which proliferate in Greece, are based on the Common European Framework of Reference for Languages (CEFR), issued by the Council of Europe.

### 3.2 Description of the research

As mentioned earlier, the specific research pertains to the creation of an on-line student journal, based on the wiki technology, with articles written in the English language by students who frequent a private language institute in Athens, Greece. The writing project involved the creation of one personal wiki for each participating student, which could also work as a ‘Portfolio’ with all the written articles that they produced, the teacher’s wiki, which served as a data bank of reference for students, concerning the operation of the specific application as well as issues of internet safety and writing guidelines, and, of course, the student journal wiki which students themselves named Studentnewspace. The students’ on-line journal can be accessed at [http://studentnewspace.wikispaces.com](http://studentnewspace.wikispaces.com) (Fig. 2).

![Figure 2: Wiki journal sample page](image-url)
The reason that underpins the teacher’s decision to create these wikis is two-folded. First, the fact that each student could have their own compilation of articles published on the internet, on a site that they created and designed according to their personal styles would not only build their confidence and boost motivation, but would also last longer than a folder with compositions on perforated paper. Secondly, although the wiki technology is perfect for an electronic journal since it is topic-centred, as opposed to blogs that contain dated entries in a reverse chronological order, the need would arise for a page to host the issues to follow, without necessarily deleting previous material. If all students used the same wiki to write their articles, it would mean that a lot of pages would be created, rendering editing and monitoring, not to mention navigating, really challenging, if not confusing. Therefore, students wrote their articles on their personal wikis, creating a new page for each topic, while publishing the articles, which would appear in the journal, was easily achieved by means of a hyperlink—the cornerstone of wikis—which linked the student’s wiki page to the journal wiki.

Another issue to be considered is the teacher’s role in the monitoring of the progress and the provision of feedback in a practical and time-efficient way. At the same time, the aesthetic aspect of the students’ pages should not be marginalised. The ‘History’ button in wikis technology has a lot to offer to this end, since it allows access to earlier versions of the page, meaning that the teacher can not only monitor the writing process (drafting, editing, etc.) but can also mark the student’s article, without depriving them of the right to correct their work and finally come up with a flawless outcome (Fig. 3 and 4). Moreover, the ‘Comments’ button provides the teacher with the option of commenting on the student’s work and providing feedback, which can be easily accessed at any time.

![Figure 3: History of editing](image-url)
The selection of Wikispaces, to act as the server for the wikis was based on the fact that the teacher had been familiar with it since she had to create her own wiki in the context of an Educational Technology Module two years before the research. The user-friendly design, the appealing graphics and nominal cost also advocated in favour of the implementation of the specific application. However, another element that played a crucial role was the secure environment that it offered since it has been used by a plethora of acknowledged educational institutions worldwide, but also for the possibility of a protected wiki, which can be viewed by anyone but can be edited only by members.

Figure 4: History button - Student’s changes following teacher’s feedback

3.3 Research Approach

The present research has employed a quasi-experimental design intended to determine whether an experimentally-manipulated variable, quantitative and qualitative student feedback, would result in improvement of student writing performance. However, analysing solely student feedback would not render adequate results as to the efficacy of such an approach. Therefore, a mixed methods approach was opted for the collection of data in the particular case study, so that the in-depth, contextualized but more time-consuming insights of qualitative research could be coupled with the more-efficient but poorer results of quantitative research.

First and foremost, a needs analysis questionnaire was administered to the students, written in both Greek and English in order to allow comprehension for students of all levels and ensure validity and reliability. Apart from the questionnaire, in the present case study, the effectiveness
of using wikis to develop writing skills was also explored using qualitative interviews with selected learners at the language institute. At the same time, the teacher kept a diary, monitoring the process of the whole project (Creswell, 2003). The teacher's diary played a salient role in the particular research as students commented on the use of wikis in the writing instruction at random moments and their reactions were spontaneous and sincere. Finally, a post-meant questionnaire was administered with the view to investigating the effect of the innovative application in the writing instruction. Basically, the questions related to the four axes of the research questions, in other words, motivation, collaboration, e-literacies and process writing. The Likert-scale was used for the questionnaire items as it is most useful for gathering respondents' feeling, opinions and attitudes on any language related topics (Brown, 2000).

3.4 The Aims of the Research

The present study has attempted to shed light on the educational potential of implementing the wiki technology in the EFL classroom in order to develop students' writing skills. With the creation of an on-line journal as its starting point and the integration of the wiki application as the primary educational tool, the purpose of the research revolved around four axes (Fig. 5): firstly, motivation levels were monitored at various stages of the research. Publishing their work on the web, addressing and responding to real people is the impetus to motivate students to write with much more enthusiasm than they would when composing traditional compositions (McPherson, 2006). However, to what extent, can the wiki journal manage to keep learners' interest alive and engage them in creative writing?

The second axis of the study involves collaboration. The way wikis have been designed offers collaboration among learners and the T both inside and outside the EFL classroom. Pair or group work in projects can take place without learners having to actually meet in person. They can exchange information by means of texts, images, videos, links, post comments or even review the development of their pages. Thus, this study also meant to investigate the efficacy of wikis in promoting collaborative learning.

From a new literacies perspective, literacy is no longer singular and print bound; instead, the iconic and digital demands of the twenty first century have opened up literacies that require transversals across print and non print-based formats (Lankshear & Knobel, 2003). Therefore, it is worth examining the manner and the degree of efficacy in which wikis can serve to develop learners' electronic literacies, assist blended learning (Singh & Reed, 2001, Vlachos, 2010) and appeal to learners with diverse learning styles (Gardner, 1983).

Finally, wiki technology was opted to support the instruction of process writing in order to prompt learners to use a draft before writing, to edit and to review their work. Furthermore, reflective writing through their own wiki could develop learners' critical thinking, as they would be required to make informed decisions, as well as exercise metacognition, i.e. reflect on their errors, and gradually improve their writing.

All four axes are interrelated and are targeted towards improving students' writing skills. Learners' motivation can be triggered by the engagement in collaborative work (the journal
project) and also by the integration of technology in the learning process. Enhanced motivation and exposure to the process writing approach can lead students to improve their writing skills.

This research aimed to answer the following research questions:

- How feasible is the realisation of an on-line journal and how effective can wikis prove to be to that end?
- To what extent can wikis sustain learners’ initial enthusiasm over something innovative integrated in the EFL classroom, and how easily can it be transformed into constructive and continuous motivation?

![Figure 5. Schematic representation of the research aims](image)

- Do wikis facilitate collaborative and reflective writing/learning?
- Will the electronic journal project actually help learners improve their writing skills?

### 3.5 The Stages of the experiment

The experiment had the following stages:

1. Checked technological equipment/Internet connection.
2. Announced and explained the wiki journal project to students.
3. Sent letters to parents informing them about the project and reassuring them concerning Internet safety.
4. Administered needs analysis questionnaire to learners.
5. Created ‘englishteacherhelp’ wiki to provide learners with extra support on wiki writing (available at http://englishteacherhelp.wikispaces.com).
6. Introduced learners to wikis and Internet safety (see Appendix III).
7. Created ‘Studentnewspace’.
8. Helped learners create accounts and wikis.
9. Learners discussed the genre of articles and visited other learners’ wikis from the USA.
10. Monitored learners’ wikis and kept a diary throughout the research period.
11. Administered post-meant questionnaire to learners.

The first articles written for the wiki journal mark the commencement of the research which lasted for approximately three months (from November to January). Writing lessons took place once a week and were fifty minutes long. Students were introduced to the topic, discussed it in class, started working on the draft and finished the article at home. Before the following lesson, they received feedback from the teacher and reviewed their work. Normally, students wrote an article every two weeks. Once they finalised it, and after receiving permission from their teacher, who also assumed the role of the editor, they uploaded it on the journal. They also undertook the task of accompanying their text with images, videos or links.

4. Presentation and Analysis of the Findings

4.1 The Needs Analysis Questionnaire

According to the findings, most of the students are computer literate and generally quite familiar with the new technologies, regardless of their age. In fact, thirty four out of the thirty seven students asked (92%) have access to the internet, and twenty nine of them have an e-mail account (78%), although approximately only half the students use it to write e-mails. With reference to social networks, a significant number has a Facebook account (62%), while a similar percentage was noted in the number of students who post comments or chat on the internet. Generally, as illustrated by the findings, it becomes apparent that students greatly associate computers and particularly the internet with entertainment. As a matter of fact, an impressive hundred per cent use the internet for entertainment purposes, such as to play computer games, and eighty one per cent of the students download and watch videos from YouTube, but only fifty seven per cent of the students surveyed use the internet to improve their English. In addition, when asked about blogs and wikis, the survey revealed that students are more familiar with blogs than wikis.

The first questionnaire also included questions regarding the students’ relationship with process writing and diverse writing strategies. It is worth mentioning that fewer than half the students make a plan or write down their ideas before they start writing, yet the majority of the respondents claim that, after they have finished writing, they always read once more in order to spot and correct their errors. Furthermore, almost half admit to thinking in Greek and translating into English while writing and sixty one per cent make use of a dictionary. Regarding assessment, twenty nine out of the thirty seven students asked claim that they always read their
teachers notes at the end of the compositions. Similarly, a high percentage of students would like the teacher to correct their articles prior to web publishing, yet peer assessment is regarded poorly, with only nineteen per cent of the students considering their classmates capable of helping them correct their errors.

Finally, the responses that pertained to the students’ attitude towards implementing computer technology and the internet in writing instruction by means of the wiki journal were quite enlightening and greatly differed from the researcher’s expectations and hopes of the project raising motivation. Despite the fact that most students expressed great eagerness to use the internet in the EFL classroom and had a positive response to writing articles in an electronic form, with the addition of digital sounds and images supplementing their text, only half would like to have their own site where they can upload their compositions and participate in an electronic journal project.

4.2 The Student Wiki Journal

The student wiki journal was created on November 27, 2012 and was named Studentnewspace by the students themselves. Of course, the creation of the students’ wikis as well as the preparation of the articles had started the previous month, and the results of the research involve the work produced within the three-month-period that followed. A total number of thirty three student wikis were created during this time, of which twelve were inactive, in the sense that students created pages without completing their article. Students produced a hundred and forty two articles, and there was a total of six hundred and forty seven edits or revisions, a term used by Wikispaces, in the student wikis. As regards the wiki journal, four pages were created including ‘home’, ‘November 2012’, ‘February 2013’ and ‘Christmas edition’ and eighty seven revisions (edits) were made.

The wiki technology provided by Wikispaces renders the creation of the wiki journal quite manageable even for the inexperienced user; nevertheless, there are two areas that needed further consideration. First, although the topic-centric design of wikis facilitates readership, the need arises for some extra space to host the previous issues of the journal, which is to be updated. In other words, the pages created would actually be the journal issues, which means that students would need to find another place to host their complete collection of the articles since not all of them are to be published. This is the reason why, in the present case study, the teacher/researcher resorted to the creation of many wikis, each one for every student, which would play the role of electronic portfolios, while the articles were published in the journal by means of hyperlinks that linked the wiki journal with the particular page of the student’s wiki.

The second area of concern is the fact that owing to the state-of-the art nature that characterises wikis, alterations are constantly in progress, and the teacher who wishes to attempt such a venture should seek continuous updating. For instance, Wikispaces used to offer the possibility to everyone to create a public wiki, that is a wiki viewed by everyone, without any charge. However, at the beginning of the survey, the researcher soon realised that the basic version of wikis offered complimentary, involved only private wikis, with a limit of five members, which would put the project at risk since student wikis could not be public. Fortunately, after
contacting the wiki help group at Wikispaces, the problem was solved and the student wikis were made public⁶.

Regarding the final outcome of the wiki journal, questionnaire findings reveal that it satisfied the vast majority of students. When asked why they enjoyed writing articles on the wiki journal, the most popular answer was the possibility it provided to add images, videos, links or avatars to their text. On the other hand, when asked about what they did not like about wiki writing, the most popular answer was the fact that it was a time-consuming process. The researcher was also drawn to this conclusion, as quite often she had to deal with time management issues due to internet failure or difficulties students experienced with the wiki technology, as well as with monitoring their work and providing feedback. All in all, the creation of the wiki journal was simple and easy and does not require specialised computer knowledge. The outcome is rather impressive; however, there are challenges involved in the constant monitoring and updating of the wiki journal pages.

### 4.3 Motivation

Contrary to the teacher’s expectations that writing for a wiki journal would boost motivation levels, the students’ initial response was rather conservative towards this innovative tool. As early as the commencement of the research, when students were asked in Questionnaire I if they would like to create their own site where they can upload their compositions, percentages were shared in half. When asked if they would like to write for an electronic student journal, the results were quite similar, with twenty one out of the thirty seven students agreeing and sixteen disagreeing. After cross-examining the findings with the diary the teacher kept throughout the research, no variations were noted. In fact, despite being quite familiar with new technologies and social networks (see 4.1), the younger students asked if it is obligatory to participate.

Within the first three weeks of the exploratory trial, after the student wikis were created and the article production and publication commenced, a turn was observed in the students’ attitudes towards the wiki journal project. As a matter of fact, even the most skeptical students actually admitted that they enjoyed writing articles on their wikis and sought the teacher’s feedback as well as consultation on the use of various wiki or other Web 2.0 tools. In fact, students themselves asked to be involved in wiki writing in every lesson and even wrote some compositions assigned by the other teacher on their wikis. It must be admitted, however, that out of the thirty seven students initially participating in the research, there were four students who did not create a wiki, while twelve out of the thirty three wikis were inactive.

According to the findings of the post-research questionnaire, the majority of students claimed to enjoy writing articles on their wikis (see Fig. 6, 7 & 8). In fact, as illustrated in the pie charts, girls responded with more enthusiasm to this innovative tool. The majority of students also found writing on the wiki more fun than the traditional ‘pen and paper’ method, with the highest percentages enjoying the fact that their wiki pages could be visited by people from all over the world. When asked if they would like to continue writing their compositions on the wiki, students’ opinions are shared: twenty per cent strongly agree, twenty six per cent agree, twenty per cent are undecided, twenty per cent disagree and, finally, fourteen per cent strongly disagree. Another interesting point is that thirty four per cent of the students originally liked the
implementation of the wiki technology in writing instruction, yet their enthusiasm was rather transient since in the process they found it boring. Finally, according to the students’ responses in the post questionnaire, writing on the wiki, despite being more fun, did not make them write more. The latter is in contrast with the generally positive results the research showed concerning the wiki journal and learners’ motivation levels, but the interviews and the examination of their work contributed to clarifying the issue, revealing meaningful data. In fact, the participants were motivated by the state-of-the-art technology and the online publishing but not to the degree that would change their writing routine.

6. I liked writing articles on my wiki (girls’ responses).

![Figure 6: Schematic representation of the responses to Q.II, q.6 (girls’ responses)](image)

6. I liked writing articles on my wiki (boys’ responses).

![Figure 7: Schematic representation of the responses to Q.II, q.6 (boys’ responses)](image)

But how can wikis sustain learners’ interest? For the limited research period of the three months, it was the teacher’s informed decision that students produced compositions only on wiki, so that the progress of their writing could be monitored. However, evidence from the interviews conducted show that a smoother transition would be preferable for students to better familiarize themselves with the innovative tool and not consider it an intruder in their language learning routine. Research showed that once they are engaged in wiki writing and become acquainted with the wiki technology, the wiki journal can be integrated in their writing instruction. Teachers should also consider their own time constraints, since providing feedback for a great number of wiki articles can be demanding. Of course, time and persistence on both
parts can yield positive results in teaching writing. Motivation could also be enhanced by inviting students to participate in various projects and then publish them in the journal. For instance, they could be engaged in the creation of a digital story or interview somebody from another country through Skype. The use of various Web 2.0 tools could also help keep students’ interest alive.

6. I liked writing articles on my wiki.

Figure 8: Schematic representation of the responses to Q.II, q.6 (total responses)

4.4 Collaboration and Process Writing

The third research question asked if wikis facilitate collaborative and reflective writing. A plethora of educators have been stressing the collaborative dimension of wiki tools (Hampel, Selke, & Vitt, 2005; Schaffert et al., 2006). For instance, the most famous wiki worldwide, Wikipedia, is considered to be a model of collaborative authorship. Therefore, from this perspective, the wiki journal promoted collaboration since it was the outcome of team work and each student could publish their articles with respect to other students’ work. When students were asked to work with a partner on a writing project that involved collaboration outside classroom, the results were rather disappointing since only a small minority of students performed the task. Nevertheless, as regards in-class work, research findings reveal that more than half the students liked working in pairs or groups, and exactly half claim to write better in a collaborative environment. For instance, one student states in the interview:

...For me group work is better than...writing alone...Ok, because, ok with the other children, in a way, we put the words together and we produce a better text...

Another fifty two per cent report to have been aided by their partners’ comments, while fifty per cent are undecided concerning whether they have assisted their partners during pair work, which could be attributed to a modest attitude. What is even more impressive is the fact that seventy two per cent of the surveyed learners disagree with discontinuing collaborative work on the wiki journal, while at the same time forty two per cent state that they perform better when they write alone. The latter lies in complete opposition to the aforementioned findings, yet again the semi-structured interviews resolved the ambiguity as it was made clear that students favoured a mixed approach with both collaborative and individual work so as to rip all the benefits each has to offer. As regards peer feedback, it can be deduced from the second questionnaire that an extremely high percentage of students found correcting and discussing
their wiki articles in class effective and beneficial, still a considerable twenty per cent admit to have been feeling bad having their wiki article been discussed in class.

When it comes to reflective writing, the research demonstrated very positive results. As a matter of fact, according to the interviews, students were excited with not being spoon-fed with corrected errors and found being engaged in the correcting process fruitful and enjoyable. The majority of them suggested that the teacher’s underlining system made them more careful and also they realised that most of their ‘careless’ errors could be easily identified and corrected by means of proofreading.

...Certainly we had the chance to see our own error, and not have it completely ready just like that and had to search for what we did wrong and what we could correct...And then the errors were not that serious, that is sometimes they were made out of carelessness...

More specifically, the data provided by the post meant questionnaire indicate that the majority of the respondents learnt how to correct their own errors while they also realised they were able to do so themselves. Generally, students found the teacher’s underlining correction method and correction code (Appendix II) very helpful. It seems that wikis greatly assisted process writing since the great majority of students learnt to be careful with coherence and also to use cohesive devices such as linking words as well as paragraphs.

After three months of writing articles for the wiki journal, the findings of the post-meant Questionnaire revealed that the majority of the participating students were still undecided as to whether the wiki journal project helped them develop their writing skills as illustrated in the grapheme below (Fig. 9). More specifically, forty seven per cent of the students asked have not reached a decision concerning the aforementioned matter, nineteen per cent are totally convinced that they have been aided by the project, while eleven per cent of the students considered themselves benefited by the project. On the other hand, twenty two per cent of the students do not consider themselves aided. Rates are equally divided between boys and girls.

37. Writing articles for the wiki journal helped me write better.

![Graph Showing Responses to Question 37](image)

*Figure 9: Schematic representation of the responses to Q.II, q.37*
However, the feedback the teacher received from students’ work on wikis showed some improvement in their writing. To begin with, students drafted and redrafted their wiki articles not only in class but also outside the EFL classroom and the History Function showed that revisions lasted for about two weeks for every article. Students were mostly concerned with accuracy, nevertheless, fluency was also achieved. Students usually succeeded in correcting their mistakes, used paragraphs and organised the material better. In figures 10 and 11, one can notice the initial and final drafts of the particular student’s writing an article. Comparing the students’ first and final drafts one can notice the changes performed, and the progress both in terms of linguistic alterations in grammar, vocabulary or syntax but also in organising ideas, paragraph formation, as well as embellishing the text with images or videos.

Furthermore, according to the interviews, the wiki journal familiarised students with writing in an electronic environment and promoted their e-literacies, both of which are considered to be salient in the students’ academic or professional future. As a matter of fact, despite a certain degree of difficulty they faced at the beginning of the experiment, was surpassed as they became more familiar with the new tool. One student states,

...at first, to upload them and because we were amateurs, it wasn’t that easy, but then we progressed.

Another student adds:

At first, we didn’t know how to work on wikis while afterwards that we learnt it after every composition we became better.

Moreover, online publishing, in terms of the sense of a real audience, also played a significant role in making students more careful with their writing product. A student reports

Yes, that thing, that people from all over the world saw it, definitely affected us. We wanted it to be nice, we wanted it to be right so that these people will visit again our wiki and see what we have done, our new projects, eh, that.

Students greeted reflective writing with great pleasure since it enhanced metacognition, led them to gain a better understanding as to the importance of advanced organisational skills and helped them build self confidence as they took up the role of the corrector, developing their critical thinking and claiming a more active and energetic role in writing. Interview findings reveal that wikis provide students with the opportunity to easily revise and redraft their written work and encourage them to proofread and constantly upgrade their wiki content. Simultaneously, they help students build their self-confidence as they realise that they can spot and easily make corrections themselves, and generally ameliorate the quality of their paper.

Under the same light, students collaborative work encouraged peer feedback and opened a window to new writing approaches which again will benefit students in the future at an academic or business level.
Figure 10: Sample of a S’s first draft (group A1)

Figure 11: Student’s final draft (group A1): Although there are still some errors, substantial improvement in the layout and development is evident

5. Discussion

In an attempt to draw some conclusions as to the effectiveness of the wiki journal project, further discussion of the findings will follow, based on the four basic research axes.
One of the teacher’s primary goals in engaging students in the wiki journal creation was to boost motivation in writing instruction. The fact that twelve out of the thirty three wikis created were inactive demonstrates that the promising state-of-the art tool did not manage to inspire some students to get involved in the first place, either because they considered such a venture difficult or because they associated computers with entertainment. What comes apparent from the interviews, though, is that the students who did get involved in the wiki journal presented high motivation levels and did not only develop self confidence and “pride of authorship” for online publishing but also exemplified active participation and shared a strong sense of common purpose, in other words, wikis contributed to stimulating writing, in accordance with previous literature (Fountain, 2005, Kovacic, Bubas & Zlatovic, 2007, Lamb, 2004, Mak & Coniam, 2008). A fundamental element that enhanced motivation was the potential the Web 2.0 tool offered in terms of applications and versioning possibilities. Specifically, a student from B2 group reports:

...The result on the computer is more satisfactory, that is you add your own pictures, you make it nicer, to look nice in your own eyes, and say look what I made, in that kind of way... And also you have more confidence watching a piece of yourself published eh... on the Internet.

It also becomes apparent that electronic literacies were inevitably employed since their engagement with the wiki journal demanded that they search for material and information in relation to the topic surveyed for the journal, thus exposing themselves to authentic material (Harel & Papert, 1991). Students’ computer skills were upgraded since apart from searching for information, they had to produce a text, add images or videos, even create hyperlinks and avatars. Some students created avatars to include in their wikis. As a matter of fact, learners did much of the publishing on the wiki journal by uploading images and videos to accompany their articles.

The collaborative character of wikis constitutes its most outstanding and greatly discussed feature since a plethora of theorists have drawn their attention to it (see, for example, Barton, 2005, Carr et al., 2007, Garza & Hern, 2005, Moxley & Meehan, 2007). What the present study revealed was that the wiki journal facilitated collaboration among learners inside the classroom and was most appreciated as the post research questionnaire and the interviews reveal. Under the light of the creation of the wiki journal and the publishing of their articles, students collaborated well and exhibited respect towards each others’ work. In addition, they assisted each other by providing peer feedback, evaluating and contributing to each others’ work. Once again, the research yielded results which further support current literature including the effects of a wiki journal on younger students studying in an EFL classroom. Nonetheless, mention should be made to the fact that there was limited comment posting which could facilitate communication outside the classroom, and students failed to successfully collaborate outside the classroom, even though the specific function was presented to them from the beginning. The latter could further assist collaboration and facilitate peer feedback.

Finally, the wiki journal was an excellent way for students to practise and internalise reflective writing (Phipps, 2005). Through the Editing and History function students were able to revise and redraft their initial pieces of work and realise that construction of knowledge is an important process demanding lots of time, effort and constant monitoring (Hedge, 2005). Wikis
helped students develop their critical thinking since they asked for and also provided feedback to their classmates work, and promoted metacognition as well as the understanding of the writing process. Students greatly appreciated the teacher’s underlying system as well as the error correction code (Appendix II). The latter along with the correction marking scheme (Appendix I) promoted learners’ autonomy and boosted their confidence as they took their learning situation in their hands and sought to correct their articles with only limited teacher feedback.

With reference to the negative aspects of the wiki publishing, all four groups unanimously found time consumption the greatest drawback of the wiki journal project and this greatly affected their attitude towards the new tool. For instance, in both the interviews, students raised the issue themselves, in an attempt to justify their conservative attitude towards wikis and the poor motivation levels. Contrary to the initial worries expressed in Questionnaire I, it was not typing that was time consuming but students had Internet access difficulties at home, they found writing on the computer less inspiring and thus they needed more time to think; performing some of the tasks in class also required more time than expected as navigating in the internet is itself an extremely time consuming task.

Generally, time management was an issue for the teacher as well since there was great difficulty in completing a writing task in class within the time limits. This is the reason why the majority of articles were completed by the students themselves at home. Monitoring students’ wikis was also extremely difficult and time consuming.

In general, despite the aforementioned negative implications, some aspects to be taken into consideration include the following:

- The exam oriented nature of the classes researched may have played a certain role in shaping students’ attitude towards wiki implementation in writing instruction. In other words, students may have perceived the wiki journal as a detour from the mainstream writing routine and were not psychologically prepared for such an innovation.
- The language institute lacked a fully equipped computer lab and thus only a few lessons entailed in-class writing. Of course, the limited number of students per class compensated for such a hindrance and publishing work successfully took place by means of the interactive whiteboard system and a couple of laptops. Furthermore, it was the teacher’s intention not to deviate too much from the classes’ common practices and also to enhance learner autonomy outside the classroom constraints.
- Under the same light, the teacher intentionally did not put much pressure on students to be involved in the wiki journal as she wished for some genuine response on the students’ behalf, otherwise motivation could not be monitored. This does not mean that it was not made clear that participation was obligatory, though.
- Last but not least, so far, most research conducted on wikis as a publishing environment for learners involved students in tertiary education, thus, far more skilled and competent to operate such a volatile tool. In fact, the present survey indicated that students’ age and level had a salient role in their attitude as well as their commitment to the project, since B2 group demonstrated the most positive and receptive stance towards the wiki journal, in spite of the fact that they were the ones who experienced the pressure of the upcoming exams the most.
6. Conclusion

The technology of wikis proved to be most appropriate for the realisation of a student electronic journal for a variety of reasons. First and foremost, it seems that a wiki journal constitutes a perfect authentic, contextualised environment for learners to practise and improve their writing skills as according to the findings, the student wiki journal motivated learners, who were actively involved, by exposing them to the infinite potential of diverse Web 2.0 tools, as well as by leading them to develop a “pride of authorship”, stemming from online publication and, of course, the existence of a real audience. Likewise, it assisted learners to develop electronic literacies and equip them with salient skills for their future academic and professional career. The research also offered evidence as to the element of collaboration, as the results indicate that the wiki journal did not only engage learners in group work, but also promoted socio-collaborative learning. Furthermore, wiki technology proved to be invaluable for the possibility it offered for asynchronous communication and constant monitoring of learners’ wikis through the History function. The latter in combination with the Edit function proved to be of paramount importance to initiating learners to process writing. As a result, learners constantly reviewed and redrafted their work, making corrections without having to rewrite their whole composition as would be the case in the print-based paradigm.

It should be mentioned, however, that wiki integration, promising as it may sound, also entails challenges, which, if disregarded, can lead the whole project to fail. Time management issues and the misconception that the Internet is associated with entertainment were the most prevalent setbacks to the wiki journal. Although the latter succeeded in motivating students and improve their writing skills, participants were not prepared to totally relinquish the traditional pen and paper method. A hybrid form in writing instruction, based on the print-based method and supplemented by the innovative potential of a wiki journal seems to be the best practice to currently follow, as a precursor of future computer-based writing instruction.

Wikis seem to have a wide spectrum of educational potential for EFL practitioners to explore and day by day moves of innovation take place. For instance, at the early beginning of the present research Wikispaces added a function called ‘Projects’ that aims to organise classroom projects and a few months later (on April 16, 2013) Wikispaces introduced a new educational product called Wikispaces Classroom, meant to further facilitate both teachers and learners. It seems that a great deal of mobility takes place in integrating wikis in education, yet there is plenty of way to go till normalisation. Until then, our generation of “digital immigrants” (Prensky, 2001) shall continue to explore the use of wikis in the EFL classroom.

Notes

1. Some wikis allow completely unrestricted access, allowing anyone to both edit and view content, while others restrict access to a group of members, allowing only members to edit page content although everyone may view it.
2. It is the researcher’s intention to have a variety of levels involved in the project for two reasons: firstly, to strengthen validity of the results by increasing the number of the
participants, and secondly, to gain some insight as to the impact the wiki project would have on elementary students in comparison with more advanced students.

3. This implication does not allow enough room for experimentation on language learning, which is the reason why time was very rationally devoted to the wiki journal project and also liable for the specific genre that is the article, since it is most common in the aforementioned language tests.

4. Wikispaces offers four different levels of permissions: public (everyone can view and edit pages), protected (everyone can view but only members can edit pages), private (only members can view and edit pages) and custom (permissions are defined by administrators at a cost).

5. According to Yin (1999), a case study must have three aspects, which can serve as a definition: it must have data from multiple sources, examine something in a real-life context, and use theory to generalize results.

6. As a matter of fact, students’ wikis were protected, meaning that everybody could view their content, but only invited members could edit the pages.

References


Appendices

Appendix I: Marking Criteria Table

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<th>Writing Marking Criteria</th>
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<tbody>
<tr>
<td><strong>Grammar/Structure</strong></td>
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<tr>
<td>Are there many grammar mistakes?</td>
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<td>Are the words in the correct order?</td>
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<td><strong>Vocabulary</strong></td>
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<td>Is there a variety of words?</td>
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<td>Is the spelling correct?</td>
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<tr>
<td><strong>Content/Development</strong></td>
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<tr>
<td>Are all the topic questions answered?</td>
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<td>Is it off-topic?</td>
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<td>Are there good ideas?</td>
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<tr>
<td>Are they well developed?</td>
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<tr>
<td>Is there enough information/details?</td>
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<tr>
<td><strong>Organisation</strong></td>
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<tr>
<td>Are there paragraphs?</td>
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<tr>
<td>Are the ideas well-organised?</td>
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<tr>
<td><strong>Coherence/Cohesion</strong></td>
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<tr>
<td>Are the meanings clear?</td>
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<td>Are there linking words?</td>
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Appendix II: Error Correction Code

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Appendix III: Introduction to Wikis

What is a wiki?
A wiki is a website where anyone can edit anything, anytime they want (Richardson, 2006). The best example of a wiki in action today is Wikipedia, the free online encyclopedia.

How can I join English teacher help wiki?
Follow the link http://englishteacherhelp.wikispaces.com and click on join. Unless you have an account, you'll have to create one.

How can I create an account/my own wiki?
Click on create an account and fill in your username, your password and your e-mail address. It's better not to use your real name for safety reasons. Also, write down your password so that you won't forget it. Below the e-mail address box there is a question asking Make a wiki? Click on No and then on join, if you just want to join a wild, and Yes if you want to start your own one. In that case, write the name of your wiki, click on protected and choose personal for the wiki type and then click on join.

What can I do with the wiki?
You can create a new page or edit an old one; you can also upload files, images or embed videos. This is your webpage and you can design it and share it with your friends and relatives by giving them the address.

How can I create a new page?
- Go to Pages and Files +.
- Click on New Page.
- Write the name of the page and choose Create.
- Write on your new page and don't forget to click on Save.

How can I edit a page?
- Go to the page you want to edit.
- Click on Edit.
- Edit your page (the toolbar is similar to that of Word).
- Click on Save to save your work.
How can I insert a picture?
Copy the picture and paste it in your page.

How can I embed a video?
- Click on **Widget** on the tool bar.
- Choose **Video**.
- Click on **YouTube** or **Other Video**.
- Go to your favorite video clip, podcast, or embedded application. Anything from [Google Calendar](#) to [Twitter](#) to [YouTube](#)!
- Find the **HTML code** to paste into your site. This will be found in a text box labeled "**Embed**", "**Embed HTML**", "**Add to My Site/Blog**", "**Link to this page**", or similar (Αποστολή, Ενσωμάτωση).
- **Paste in the HTML** in the box and click "Preview" to see how it will look. When you save your changes by clicking the "**Save**" button, your media clip or application will appear in your Wikispaces page.

How can I upload a file?
- Connect to the internet.
- Go to [http://studentnewspace.wikispaces.com](http://studentnewspace.wikispaces.com) and sign in. Make sure you have created an account, otherwise you won’t be able to edit.
- Go to the page you want to edit.
- Click on **EDIT**.
- Click on the place you want your file to appear.
- Click on file which you will find on the tool bar. Double click on **+Upload files**.
- Select the document or file you want to upload and click on it.
- Well done! You have uploaded your file. Don’t forget to save it!

How can I create a link?
- Choose the phrase or sentence that you want to link.
- Click on the **Link** button on the tool bar.
- Write the **wiki** and the **name of the page** you want to link it with.
- Click on **Add Link**.

How can I post a comment?
- Next to the **Edit** button there is the **discussion posts button** with two bubbles (clouds). Click on it.
- Click on **+ New Post**.
- Write the **subject** and your **message**.
- Click on **Post**.

Be careful!
Don’t forget that anyone can visit your will, even people who are not members, so don’t give away your personal information e.g. your real name and home address. Also, you need to respect other people’s work and use appropriate language. Don’t be rude and don’t swear!

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Using wikis to encourage the Greek primary steps of the e-ELP
Τα πρώτα ελληνικά βήματα του e-ELP μέσα από την πλατφόρμα του wiki

Maria Mexi & Kosmas Vlachos

In search of innovative assessment techniques in Greek primary education, the present paper sketches out an attempt of the implementation of the electronic European Language Portfolio (e-ELP) via a wiki platform, for the sixth grade of a state primary school. For the needs of the current study just the ‘Language Biography’ section of the ELP was developed. The extent to which its content, layout and use of the proposed Self Assessment Cards can promote participants’ complicated self-assessment process in terms of motivation, meta-cognitive awareness and autonomy were thoroughly investigated. Three research tools, apart from the Self Assessment Cards, were employed for the collection of the quantitative and qualitative data of the current research: the Idealus questionnaire, the teacher’s interviews and notes from the observation of the three Whole Class Discussions. The results of the study were primarily positive as far as motivation is concerned, as the electronic medium enjoyed the acceptance of the participants. However, for the indicators of metacognition and autonomy, in the strenuous self-assessment task, extra time by learners so as to flourish was deemed necessary.

Σε αναζήτηση καινοτόμων τεχνικών αξιολόγησης στην Ελληνική Πρωτοβάθμια Εκπαίδευση, η παρούσα εργασία σκιαγραφεί μια προσπάθεια εφαρμογής του ηλεκτρονικού Ευρωπαϊκού Φακέλου Γλωσσών, μέσω της πλατφόρμας του wiki, στην ΣΤ’ τάξη ενός δημοτικού σχολείου. Για τις ανάγκες της παρούσας έρευνας δημιουργήθηκε μόνο το ‘Γλωσσικό Βιογραφικό’. Διερευνήθηκε ο βαθμός στον οποίο το περιεχόμενο, η διάρθρωσή του καθώς και η χρήση των προτεινόμενων Καρτών Αυτοαξιολόγησης μπορούν να προωθήσουν την πολύπλοκη διαδικασία της αυτοαξιολόγησης των συμμετεχόντων σε σχέση με την ενθάρρυνση, την μετα‐

γνωστική επίγνωση και αυτονομία. Τρία ερευνητικά εργαλεία, εκτός από τις Κάρτες
**Key words**: e-ELP, e-portfolio, alternative assessment, self-assessment, motivation, autonomy, wikis, reflection, metacognition

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### 1. Introduction

The beginning of the school year 2012-2013 brought a promising change to the Greek primary assessment practices, as portfolio assessment officially started to be implemented through the European Language Portfolio (ELP), for the needs of the French, German and English lessons (Καγκά, n.d). The general idea of the ELP is that every learner possesses a language folder indicative of his/her linguistic achievements throughout his/her school years (and longer if s/he wishes) a folder that can be updated by the learner him/herself. The folder is divided into sections and the student is invited to get actively engaged in the self-assessment process, through the choice of indicative pieces of work that are directly connected to reflective statements by the learner him/herself. Educators in the Northwest, through the Northwest Evaluation Association (1990) described portfolios as “a purposeful collection of student work that exhibits the student’s efforts, progress, and achievements in one or more areas. The collection must include student participation in selecting contents, the criteria for judging merit, and evidence of student self-reflection” (Barrett, forthcoming).

However, according to the researchers’ belief, every innovation should be adapted to one’s own reality if it is to be embraced. The reality of the Greek primary context and the difficulties that teachers and students encounter within it, make it a necessity to strongly motivate both parts for the actual use of the ELP and convince them that the completion of the folder is not extra burden to the school schedule or an innovation that will soon be abandoned.

Bearing all these in mind, the present research was designed and conducted as part of the first author’s M.Ed. thesis, which was carried out under the supervision of the second author. The researchers intended to examine whether an adapted version of the ELP, the electronic ELP (e-ELP) in a wiki platform, can have positive influence on two groups of learners from the 6th grade of a primary school as far as motivation, meta-cognition and autonomy are concerned. The extent to which the use of the particular Web 2.0 tool (wiki) and its proposed layout can motivate learners and facilitate their quest of flaws and potentials in the English language, during the demanding self-assessment process was investigated. Thus, this paper in section 2 unfolds the theoretical framework that underpins the issues of alternative assessment and wikis. In section 3 the research context, the research methods, the rationale underpinning the implementation procedure and the research tools that were employed for this research are...
described. Finally, section 4 discusses the findings of this research, with the hope that the current research has shed light on the real value of an e-portfolio for young learners in the Greek reality. Being a case study, its limitations are discussed and further research in the specific field is encouraged.

2. Literature review

2.1 Why employ alternative assessment?

In what ways is alternative assessment more compatible with the needs of the latest TEFL curriculum (DEPPS) and the contemporary Greek society than traditional assessment tools? Critiques point out that traditional assessment practices place too much emphasis on assessing content contrary to alternative assessment techniques that focus on communicative competence and skills; therefore, traditional assessment “fails to measure the extent to which learners have mastered creativity, meta-cognition, and other higher order skills which are mostly the prerequisite of real life situations, work employment, personal and professional growth” (Senapaty, 2010, p.39).

Interesting, also, appears to be the distinction of assessment into two types, depending on their purpose: assessment of learning and assessment for learning. Stiggins (2002), elaborating on the difference between these two types of assessment, highlights the importance of the latter- i.e. assessment for learning, (tantamount to formative assessment). The Assessment Reform Group (Barrett, 2005) provides us with a useful comparison of these two key assessment purposes. They point out that, on the one hand, assessment of learning mainly refers to checking what has been learnt to date though information that is usually gathered into digestible numbers and scores; it is designed for those not directly involved in daily learning and teaching and it compares the student’s learning to either other students’ learning or the “standard” set for a grade level. On the other hand, assessment for learning refers to checking learning to decide what to do next through detailed, specific and descriptive feedback in words; it is designed to assist teachers and students and it is focused on improvement, compared with the student’s ‘previous best’ and progress towards a standard set.

2.2 Taking a step forward: The e-Portfolio, definition and purposes

It is obvious that there is a need for more flexible ways of assessment that directly support learning and measure the new qualities in a stress-free way. To this end, the next step was planned and some empirical research was conducted on the “primary steps of ELP’s digital counterpart”, the electronic ELP (e-ELP) via a Wiki, which serves as the proposal of the current paper.

But, what is an e-portfolio? The relevant literature abounds with e-portfolio definitions. Dr Helen Barrett – the awarded for her contribution to e-Portfolio research and development researcher – gives her own definition:
“An electronic portfolio uses electronic technologies as the container, allowing students/teachers to collect and organize portfolio artifacts in many media types (audio, video, graphics, text); and using hypertext links to organize the material, connecting evidence to appropriate outcomes, goals or standards.” (Barrett, 2005, p.5).

Several technologies can support the development of an e-portfolio such as web logs (blogs), and wikis, which are the second generation web applications, the so called Web 2.0 in the computer world. Wiki websites, in particular, are a form of content management system which allows users to add, edit or remove the content of a website (web pages, text, illustrations, etc) and also enables tracking of all the changes of these web pages over time. They are an efficient tool for collaborative writing, with a potential for interaction between the content creators and users/readers (Kovacic, Bubas, & Zlatovic, 2008).

Which are the options for the creation of an e-portfolio? “Any tool that allows the individual to design and publish digital content could be used for e-portfolio” (Senapaty, 2010, p.43) and there is a variety of e-portfolio tools available at the moment. Stefani, Mason, & Pegler (2007) have divided these tools into four main types: commercial software (which includes Content Management Systems with an e-Portfolio module), proprietary systems (often designed by universities), open source e-Portfolio software and open source common tools (such as web authoring tools).

Another categorization provided by Darren Cambridge (2007) suggests the following types: generic tools such as word processing, HTML editors, Web design tools (Adobe Dreamweaver, Nvu), commercial tools (such as Digication, the American e-portfolio provider for K-12 and Higher Education schools across the United States), open source tools (such as Elgg, Mahara, Sakai and Moodle), homegrown tools (such as Portfolio Community in University of Denver), social blogs and wikis and hybrid tools.

As stated in Barton and Collins (1993, in Barrett, 2005, p.14) “the decision of the purposes for the portfolio” is of outmost importance during its preparation. The purposes in creating an electronic portfolio vary and they determine its content. Barrett (2011) distinguishes two major purposes for developing e-portfolios: portfolios as showcase or presentation portfolios, with emphasis on the final product, i.e. the end result of the e-portfolio implementation and portfolios as workspace or working Portfolios, with emphasis on the process, i.e. the activities that produce the result.

Student ownership is another factor that distinguishes portfolios into the following types “from the top to the bottom in order of maturity” (Hebert, 2001 in Barrett, 2005, p.14):

- folder of child’s work
- collection of child’s work
- teacher-organized portfolio or curriculum portfolio
- showcase portfolio or achievement portfolio
- progress portfolio


- teacher-and-child-organized portfolio
- child-organized portfolio

2.3 Web 2.0 Technology: Employing a motivating assessment tool

2.3.1 The identity of Wiki

“The students being taught today are no longer the people our educational system was designed to teach. [...] While the students of today can be termed digital natives, many educators could be better termed digital immigrants.”

(Prensky, 2001, p.1).

But, how can portfolio assessment and self-assessment become more appealing to our “digital natives”? Maybe the answer is by employing computing technologies in the EFL classrooms for the needs of the generation that “has grown up using the Internet and view it as an entirely ordinary environment of interaction” (Ken et al, 2008, p. 290). Consequently, the proposal within the context of the present research is to introduce portfolio assessment in its digital form, via a wiki, and at the same time to integrate it into the learning process for the sake of normalization.

Which are the characteristics of the particular Web 2.0 technology tool- wiki- that make it appropriate for the implementation of the e-portfolio? Wikis are net-based, hypertextual and collective authoring tools (Leuf & Cunningham, 2001 in Lund, 2008) whose strength, as Hsu (2007) comments, is the ability for numerous interested readers and users to express ideas online, edit someone else’s work, send and receive ideas, and post links to related resources and sites. By pressing an editing button, every page can be changed or deleted and the new version is immediately available online. As a result, wikis allow for greater collaboration and interactivity (Chawner & Gorman, 2002 in Hsu, 2007).

Wagner (2004, in Hsu, 2007, p.80), also, developed a set of design principles that relate to wikis, characterizing them, among others, as ‘open’ and ‘organic’. ‘Open’ means that anyone can edit a wiki; rather than passively reading a passage of text or related information a reader of a wiki can also take on the role of a writer, making changes to the text (reorganizing, editing, re-writing and marking up) at will. ‘Organic’ means that the information can be continuously evolving, as changes and edits are made.

In education, wikis promote student participation and they give a sense of group community and purpose in learning; they offer a relaxed sense of control over the content, they are simple, informal and “never finished” (Hsu, 2007, p. 80). They can be used either as a resource tool, to which the users of the page resort for information or as a collaborative workplace, since they can be public and easily editable.

However, their openness to the “community” is simultaneously their weak feature, as the content of a wiki can become unreliable and inaccurate, if it is improperly managed (Hsu, 2007). Especially for K-12 classroom, the use of public wikis by young users may prove to be
problematic as far as their “readability level” and “content” are concerned (Every et al., 2010). In Table 1 the main wiki features are summarized.

<table>
<thead>
<tr>
<th>WIKI FEATURES</th>
<th>Description</th>
</tr>
</thead>
</table>
| Theoretical foundations| - Conversational technology  
                          | - Constructivist learning tool                                               |
| Advantages/ Disadvantages| - Contributions and editing by a group                                      
                          | - Open access to all users                                                  
                          | - Collaborative                                                             
                          | - Lack of organization and structure may result in an unmanageable wiki    
                          | - Tracking of contributions and modifications can be difficult             
                          | - Quality control                                                          |
| Course suitability      | - Knowledge management                                                      
                          | - Writing                                                                    
                          | - Group work in courses                                                     |
| Educational applications| - Collaborative writing/authoring                                           
                          | - Brainstorming activities                                                  
                          | - Knowledge base creation                                                   |

Table 1: Wiki Features (adapted from Hsu, 2007)

2.3.2 Tracing Wikis’ theoretical roots

As for its theoretical background, social-constructivism is believed to be the basis for the use of “conversational technologies” or “constructivist learning tools” in the classroom. Both terms are mentioned in Jeffrey Hsu’s study (2007), referring to a wide range of familiar systems and software such as e-mail, IM (Instant Messaging), discussion fora, wikis and weblogs.

Vygotsky’s (1978) ideas on cognitive development place emphasis on the importance of “social interaction” claiming that “we become ourselves through others”. The whole process of cognitive development is social in nature, in other words the child starts to develop cognitively when it internalizes the meanings provided by the social interaction, in conjunction with a more capable person (scaffolding). Vygotsky (1978) also defines the zone of proximal development (ZPD) as “the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more intelligent peers” (Vygotsky, 1978, p. 86).

“Conversational technologies” or “constructivist learning tools”, such as wikis, seem to provide catalytic conditions for active involvement in constructing knowledge, critical reflection on
content and collaborative interaction with peers (Benson, 2001; Blin, 2004; Leahy, 2008; Meskill & Ranglova, 2000; Murphy, 2006; Schwienhorst, 2008 in Lee, 2011, p.89). Lund (2008, p.40), in an effort to relate sociogenesis to language production in a wiki, talks about the “collective view of the ZPD”. Wikis are by their nature arenas of collective activity, so a wiki has the potential to advance and realize a collective ZPD.

To sum up, wikis’ collaborative nature is directly connected to the principles of social constructivism. As for the development of the e-portfolio, it seems that it is wikis’ both collaborative and editable nature that makes it a motivating assessment tool and gives the opportunity to the learners for the development of a digital “story” of their learning (Paulson et al, 1991).

The theoretical background sends a promising message for the implementation of the e-portfolio as an alternative assessment technique. It would be interesting at this point to examine whether theory coincides with practice.

3. The research design

To the researchers’ knowledge, the study of the relevant literature reveals few attempts for language e-portfolio implementation within the Greek educational system. Among these, special acknowledgement should be attributed to the attempts of Dimitrakopoulou (2011), Boutsia (2012), and Kyriazidou (2012). The first two dissertation theses refer to language e-portfolios in vocational training and adult migrants respectively while Kyriazidou’s (2012) thesis pinpoints the implementation of the printed portfolio (ELP) to 5th and 6th primary school students.

Intrigued by the need for empirical research in the specific field in Greek primary education and the encouraging messages that the theory about portfolio assessment and e-portfolio sends, it is hypothesized that an adapted version of the ELP, the electronic ELP (e-ELP) in a wiki platform, can have positive influence on two groups of learners from the 6th grade of a primary school as far as motivation, meta-cognitive awareness and autonomy are concerned. To this end, the present research was guided by the following research questions:

- To what extent can the e-portfolio, via a wiki, motivate the students to be engaged in the self-assessment process?
- To what extent can the guided form of the structured wiki facilitate learners to gradually develop their meta-cognitive skills and meta-language both in the Greek and the target language?
- To what extent can the e-portfolio help the learners assess their performance in the target language more effectively compared to the printed portfolio?
- To what extent can portfolio assessment promote learners’ autonomy?

3.1 The research context

The learners that this research focused on were the two groups of the 6th grade in a state primary school in the center of Piraeus. The first group (ST1) consisted of thirteen students-
seven boys and six girls - while the second group (ST2) consisted of fifteen students - six boys and nine girls. In total, 28 students, that is 13 male and 15 female, participated in the research project. The participants did not share the same cultural background, with some of them coming from Albania and others from Pakistan. Their English lesson took place three times a week and each session lasted 45 minutes. They all received additional tuition at private institutes of foreign languages and their level varied from ‘Breakthrough’ (A1) to ‘Threshold’ (B1) according to the Common European Framework of Reference (CEFR). Both ST1 and ST2 consisted of students with learning difficulties (dyslexia).

3.2 The research tools

An attempt was made by the researchers to collect data via a “mixed methods approach”\(^4\) (Creswell, 2003, p.15), for the sake of “reliability”\(^5\) and “validity”\(^6\) of results (Bell, 2010, p.119). As suggested by Frechtling, Sharp & Westat (1997, pp.1-8), through the mixed method design, researchers can build on the strength of each type of data collection and minimize the weaknesses of any single approach.

Thus, in the present case study, research data were collected through a combination of both quantitative and qualitative processes, that is, via the ‘Idealus’ questionnaire, the completion of the students’ Self Assessment Cards (SACs) in the Wiki, and the interviews of the classes’ English teacher as well as the notes from the Whole Class Discussions (WCDs). More specifically, the questionnaire was designed on pedagogical premises appropriate for young learners. Specifically, an imaginary story, introducing the students to the aims of this questionnaire through an imaginary “new classmate” from another planet (Idealus), was a different, interesting, eye-catching way to attract the young respondents’ attention. The items were mainly based on three questionnaires – the Motivated Strategies for Learning Questionnaire (MSLQ) by Pintrich et al. (1991); Cotterall’s questionnaire about autonomy (1995); and the Learner Autonomy Questionnaire by Kashefian (2002) – which were adapted accordingly and translated by the researchers. This multi-method approach for the data collection is also known as “triangulation, a term used to describe the “use of multiple data sources and multiple methods of data collection in order to reduce subjectivity and increase the validity of the findings” (Alderson & Beretta, 1992, in Karavas, 2004: 179).

3.3 The rationale of the implementation

The whole project included eight lessons in the school’s computer lab. Each lesson - having the title “Portfolio 1”, “Portfolio 2” etc (see figure 1 in Appendix IV) – was arranged to be done after the completion of the relevant section in the course book; the learners were invited to complete in the Wiki similar activities to the ones of the course book (see Appendix III) and then assess their performance in a particular skill, by completing the SAC for this skill (SAC for Listening, SAC for Speaking, SAC for Reading and SAC for Writing) (see Appendix II).

To be more specific, for their self-assessment in Listening, for instance, the two classes first completed the listening task of their book in their classrooms. The next lesson was conducted in the computer lab and through the wiki the learners had the chance to listen to the task they had done once again, but this time the purpose of listening was not to complete the task but to
remember, think and evaluate their performance in the Listening Skill through a recent and concrete example. The sequence of the instructions on the wiki (see Fig. 2 in Appendix IV), the learning activities that were similar to the ones of the unit in the course book and the questions in the SAC (see Appendix II- sections A-C) served the same purpose: to help the learners assess themselves not through abstract statements about their general performance in the skill but via concrete examples to facilitate them to develop their metalanguage and to get self-evaluated. The same concept was adopted in all "Portfolio lessons" that followed.

The researchers share the same view as Kohonen (2000, p.2), who points out that “it is not easy for anyone to become reflective about one’s learning. Young students have little experience and knowledge about learning in general and even less about language learning as a linguistic and psychological phenomenon.” And he concludes that “it is natural to teach student reflection in connection with concrete learning tasks, with supportive tutoring and comments by the teacher”. Some snapshots of the Cool 6th graders’ wiki can be found in the Appendix IV (figure 3) of the present paper.

4. Discussion of the results, limitations & recommendations for future research

Can the implementation of the e-ELP in the Greek primary context benefit the learners as far as motivation, metacognitive awareness and autonomy are concerned? Can e-ELP be accepted by young learners more than its printed version? Having no intention to over-generalise, it is worth mentioning that the research that was conducted in the particular sample of learners indicated that the e-ELP implementation can turn out to be both a useful and an enjoyable experience despite several constraints that may have been encountered. The results of the questionnaire and the data deriving from the WCDs and the teacher’s interviews were mostly positive.

The questionnaire findings were gathered by 25 out of the 28 learners that participated in the research, as there were three absences the day that the questionnaire was distributed. The results are presented in close relation to the four research questions of the present study. It is worth mentioning that the 25 questions in the questionnaire are in a random order, so it might be helpful to be presented in four groups in the sections to follow. Three-point Likert items (1932) that can be rated as ‘1-Yes’, ‘2-No or False’ and ‘3-Not Sure or Neither’ have been employed. The quantitative data analysis is derived from the usage of the statistical software package SPSS.

4.1 To what extent can the e-portfolio, via a wiki, motivate the students to be engaged in the self-assessment process?

Being the fuel of the learning vehicle, “motivation is evoked to explain what gets people going, keeps them going, and helps them finish tasks” (Pintrich & Schunk, 2002 in Pintrich, 2003) Thus, the novel and demanding task of self-assessment needed a strong motive so as to encourage the young learners to get involved in the whole process. The e-ELP seems to have succeeded in playing the role of the driving force of the self-assessment process as both its content and layout attracted the young assessors’ attention.
Regarding its content, according to the questionnaire findings, the vast majority found it both useful and enjoyable to be self-assessed (88%). It seems that it managed to provide the learners with ‘favourable self-perceptions of competence’, by putting emphasis to what the students ‘can do’ in L2 and encouraging them to think of ‘what to do next’, when they had difficulties. The successive steps that the learners followed for every ‘portfolio lesson’ satisfied, to a great extent, the need for hard but achievable goals (proximal goal setting); revealed each learner’s sense of ‘self-efficacy’, as the majority of them managed to analyse in the SACs the reasons for their success or failure in the activities; enhanced their self-confidence, as it involved even the weaker learners in the completion of the SACs.

However, it should be mentioned that during the lessons and the WCDs, the learners expressed a feeling of uncertainty for the ‘correctness’ of their reflections on their performance. We concluded that this feeling should have been expected because these learners are used to a totally different assessment system. They are used to receiving the formal opinion of a more capable adult in the form of scores and they expect a clear ‘correct’ or ‘wrong’ response to what they do. For the same reason, they expected from the teacher constant encouragement and assistance.

What is also interesting is the fact that they do not seem to be motivated enough to keep a portfolio for other subjects, as half of them (48%) were either neutral or negative to their answers. The open-ended form of the particular question shed light to the reasons for the negative answers. The students’ attitude towards the e-ELP seemed once again to be positive as, when the learners were asked to elaborate further for their negative answer, they responded that “a portfolio is better to be used only in foreign languages” or that “there aren’t other subjects that would be interesting enough so as to keep a portfolio” (see Appendix III, in Mexi, 2013); these responses could lead to the assumption that the reasons for the negative responses are other than the e-ELP.

Regarding its layout, the electronic medium of the ELP (the wiki) enjoyed the complete acceptance of the students, as the questionnaire findings revealed (100% positive answers). All in all, the results of the present case study indicated that the young assessors were highly motivated to be engaged in the alternative assessment process through the wiki platform, with their positive answers ranging from 68% to 100%.

4.2 To what extent can the guided form of the structured wiki facilitate learners to gradually develop their meta-cognitive skills and meta-language both in the Greek and the target language?

The development of metacognitive skills and meta-language - the language which talks about the language- in other words the language that was used by the students when they were self-assessed, was the focus of the second research question. What was first investigated was the participants’ perception about the help the e-ELP offered them so as to reflect on their performances in the four skills and, second, indications of development of meta-language both in the Greek and the target language.
The results coming from the questionnaires revealed that a quite satisfactory number of the respondents, ranging from 68% to 76% believed that the e-ELP helped them develop their metacognitive skills and their meta-language. The concrete examples of the learners’ performance in specific activities, through the aid of links and audio-visual material in the wiki platform (that were used just before the completion of the SACs) facilitated the assessment process and depicted the whole picture of the portfolio lessons. It was clear to the students what the aims of the lessons were (i.e. to get self-assessed) and why they were navigating the wiki pages. Thus, the clear process that was presented to the participants in a playful way via this web 2.0 tool encouraged the development of their metacognitive knowledge and part of their metacognitive control. The young assessors realised their abilities (declarative metacognitive knowledge), made decisions about the ways that they would overcome their difficulties (procedural metacognitive knowledge) and the place and time that they would employ specific strategies (conditional metacognitive awareness). Moreover, they managed to develop an aspect of metacognitive control, that is the ‘planning’ process, as they were able to decide how to overcome their learning obstacles (see SS’ reflections in Appendices V & VI, in Mexi, 2013).

What seemed to worry the researcher were the results concerning the question whether the e-ELP helped the participants to set learning goals. Half of the respondents were either neutral or negative, assuming that the learners did not have the time to reach ‘evaluation’ and ‘regulation’ stages of metacognitive control and felt the need to resort to the teacher’s help in order to set goals. These stages probably required more time throughout the school year in order to be reached.

As for signs of meta-language, samples from the learners’ reflections in the SACs showed that the students managed to articulate to a satisfactory degree their thoughts when assessing their strengths, weaknesses and future plans for improvement (see Appendix V, in Mexi, 2013). Most of them also managed to offer a precise definition of the “portfolio” concept in the first open-ended question of the Idealus questionnaire (see Appendix III, in Mexi, 2013). Although these learners had no previous experience to alternative assessment techniques and found it difficult, at first, to reflect on their performance in the subject of English, the guidance and the gradual practice seemed to facilitate the whole process.

4.3 To what extent can the e-portfolio help the learners assess their performance in the target language more effectively comparing to the printed portfolio?

The overall attitude of the learners towards the e-ELP was positive and seemed to enjoy it, as the questionnaire findings revealed (positive answers ranging from 76% to 80%). Being organic, it allowed the constant development of its content through continuous edits. Thus, the material of the ‘portfolio lessons’ and the feedback from the SACs, could be easily published online and shared among the participants and the researcher. In addition, having been used as a resource tool, it was exploited both as a kind of ‘digital assessment archive’ of the two groups and as the classes’ digital fun corner.

However, some participants expressed their scepticism towards the practical implementation of the e-ELP and thought that it may be “time-consuming” or “difficult to be completed without teacher’s help”. Maybe this scepticism derives from the practical difficulties that the students
encountered in the computer lab; the slow internet connection and the limited number of PCs that did not allow each student to get enough practise, spoilt the original genuine enthusiasm. Despite the difficulties, the willingness and joy of the learners, when the sessions were, eventually, conducted successfully in the computer lab, were apparent according to the teacher’s interviews and the researcher’s observations during the WCDs.

4.4 To what extent does portfolio assessment promote learners’ autonomy?

In terms of autonomy the results were not as positive as it was initially expected. The mastery of autonomy cannot be achieved without patience, persistence and time. Portfolio assessment, representing the “assessment for learning”, as it was previously discussed, is something more than ‘easily digestible numbers and scores’. The study indicated that a lot of discussion and instruction was required before each computer lab lesson and still the students showed to be depended on the teacher’s help and guidance, both for their self-assessment comments, during the completion of the SACs, and the navigation in the wiki platform.

The sense of dependency on the teacher was also confirmed by the questionnaire findings as only half of the respondents expressed confidence to be the ones “who know better than anyone else the most effective way to learn the foreign language” (question 16). Another 40% expressed the belief both that it is the teacher’s role to guide them as well as to assess them through grades, showing their unreadiness to accept not only the new assessment technique (portfolio assessment) but also their new role as assessors of their performance. This also coincided with the results in questions 21 and 22. When they were asked in a straightforward way, only half of the participants showed their preference to alternative assessment versus grades and 36% said that they were not sure if they would like to implement it permanently.

However, it is interesting to be mentioned that some students proposed a combination of the two assessment techniques. Moreover, their enthusiasm remained in questions concerning the collaborative nature of wiki as they showed their willingness to use it in the future independently from home (60% responded positively), quite often (70%), at their free time along with their friends (80%). Thus, the researcher concluded that the extent to which autonomy can be enhanced through the e-ELP implementation depends on the attempt to minimise the constraints that are outnumbered in the following section.

4.5 Limitations of the conducted research

It would be important to mention that although the results of the research are quite satisfactory, a number of constraints should be taken into account. To start with, in the continuum of portfolio’s ownership, from portfolios as a folder of child’s work moving to child-organised portfolios it seems that the e-ELP of the current case study stands somewhere in the middle. The lack of sufficient equipment (no more than six PCs in the school’s computer lab), as it is the case in most of the Greek state schools, the slow or many times the lack of internet connection and the limited time for the completion of the current project, were some of the factors that did not let the e-ELP flourish. Thus, the present e-ELP, due to the above reasons, did not have the chance to become a sample of children’s ownership.
In addition, the project had to work simultaneously at two levels: it had to familiarize the students not only to the complex process of self-assessment, which was a novel experience for them, but also to the use of the wiki platform. This is quite difficult to be achieved within the school’s schedule and even more difficult when the students are not technically proficient and do not have their own PC (or they lack internet connection) at home. As a result, one of the most important characteristics of the e-ELP could not be exploited: its collaborative nature. The students did not have the opportunity to experience any interactions with each other through the wiki.

Another constraint to be considered is the fact that the present e-ELP managed to develop just one of the sections of the printed ELP- the Language Biography in the form of SACs, while other sections could also be included if the portfolio was developed for more than one school year. The e-Dossier, for instance, would be interesting to be developed, so as more of the learners’ artifacts to be connected to the whole assessment process. The audio and visual material that can be embedded in the wiki platform, could make the “story to be told” more vivid than ever.

4.6 Recommendations for further research and concluding remarks

Taking the above limitations into consideration, it is suggested that more time is essential to be devoted for the implementation of an e-Portfolio. It is both the researcher’s and the teacher’s belief that the current project would have been widely accepted by the participants, without any signs of doubt or skepticism, if the current research had been conducted during the whole school-year. The participants would have had more opportunities to familiarize themselves with the e-ELP and they would have become more skilled to create their own electronic folder- a personal wiki platform for each of the students.

It is also more than necessary for the collaborative nature of the wiki to be examined. In what ways would the participants get engaged to portfolio assessment if they exchanged their comments and suggestions by viewing and editing each other’s wiki? How could the teacher of the class cope with the editable wiki pages and their continuous changes? Would s/he be able to gain control of the whole process and take advantage of it so as to benefit his/her students?

The above issues could be some possible suggestions that it is worth to be further investigated both in primary and secondary education, in a wider scale, as the present research was a case study. Its results are promising enough and it is strongly advised to be expanded.

To conclude, firstly, in terms of motivation the e-ELP was for the participants a highly motivating, useful and enjoyable experience. Regarding its role in the development of metacognitive awareness, one of the stages that lead to metacognitive control- that is the ‘planning’ stage- was satisfactorily developed. On the contrary, for ‘evaluation’ and ‘regulation’ stages more time for their development seems to have been required. As for autonomy, it should not be ignored that the results, despite being quite promising, indicated the young assessors’ feeling of uncertainty and dependence on teacher’s help, both for the completion of the SACs and the navigation in the wiki platform. Due to this feeling, the constraints that were encountered during this case study need to be taken into account if the e-ELP innovation is about to be implemented in the future. Hickson’s encouragement to keep trying when the
required results are not achieved from the first attempt, coincide with the researcher’s belief. A more extended time schedule is strongly suggested and the e-ELP is bound to constitute the alternative suggestion that will bridge the gap between the old and the new.

Notes

1. Alternative assessment, including portfolio assessment, can be defined as “any method of finding out what a student knows or can do that is intended to show growth and inform instruction and is not a standardized or traditional test” (Pierce & O’Malley, 1992, in Shaaban, 2001, p.17).
2. Digital natives are people who have grown up in the digital world using technology as a way to communicate, record, educate, and understand society. Today’s tweens and teens are digital natives as they have had access to computers, cell phones, email, and other forms of technology since birth. Digital Natives speak the language of technology and are as comfortable with technology as past generations have been with pen and paper.
3. Bax (2003, p.23) had raised the issue of “normalization” of technology in the classroom practices, referring to the stage when “a technology is invisible, hardly even recognized as a technology, taken for granted in everyday life”.
4. The collection and analysis of both forms of data (quantitative and qualitative) in a single study.
5. Reliability is the extent to which a test or procedure produces similar results under constant conditions on all occasions.
6. Validity is the design of research to provide credible conclusions.

References

Barrett, H. C. (forthcoming). Electronic portfolios. A chapter in Educational Technology; An Encyclopedia to be published by ABC-CLIO.


APPENDICES

APPENDIX I: Idealus Questionnaire

Hi kids!

This is your new classmate, Idealus! He comes from another planet, the Idealand, which is the Land of Ideas! In this planet everybody comes with up new ideas and saves it in a new, magic box, the Ideanet. But our friend is in trouble! He takes part in a competition with the title: ‘Assess yourself! Make your own e-portfolio and upload it in the wiki of your class’. You see, in Idealand as well, kids learn about self-assessment via their PC! But Idealus is a little bit confused with the e-portfolio and wiki and needs your help so as to learn and understand how to use it!!

What do you think, can you give him some advice by answering the following questions?

Remember:
....there is no right or wrong answer!
....nobody will know who you are, as you don’t need to write your name!
....be honest! In this way we will be able to help Idealus win the competition!

Have fun!!!

Idealus is sad....he hasn’t understood what exactly portfolio means.......can you explain to him: 1) what it is and 2) how it is used?

1. Do you think that Idealus can learn to fill in the Self Assessment Cards of the portfolio easily?

<table>
<thead>
<tr>
<th>YES</th>
<th>NO</th>
<th>NOT SURE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. Has the e-portfolio (wiki) of your class made you fill in the Self Assessment Cards pleasantly?

<table>
<thead>
<tr>
<th>YES</th>
<th>NO</th>
<th>NOT SURE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

3. Did you like it that it was through your PC?

<table>
<thead>
<tr>
<th>IT</th>
<th>I DIDN'T</th>
<th>NEITHER YES N</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

   If you could sign in the wiki from home, would you do it?

<table>
<thead>
<tr>
<th>YES</th>
<th>NO</th>
<th>E</th>
<th>NOT SURE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4. If yes, how often do you think you would do it?

   - Every day
   - 1-2 times a week
   - Once per month
   - Less than once in a month
   - Not sure

5. If yes, how often do you think you would do it?
I think that Idealus likes the idea of being self-assessed ….

6. Do you like assessing yourself on your own?
   - [ ] YES
   - [ ] NO
   - [ ] NOT SURE

   If no, why?

7. If you could make a portfolio for other subjects, would you do it?
   - [ ] YES
   - [ ] NO
   - [ ] NOT SURE

   If no, why?

8. Did you like the e-portfolio more than the printed portfolio?
   - [ ] YES
   - [ ] NO
   - [ ] NOT SURE

Are the following TRUE or FALSE? Put your answers in the Lie Detector Machine:

<table>
<thead>
<tr>
<th></th>
<th>TRUE</th>
<th>FALSE</th>
<th>NEITHER TRUE NOR FALSE</th>
</tr>
</thead>
<tbody>
<tr>
<td>9. E-portfolio helped me think of the right ways to study, so I will learn the language well</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. It is useful for me to learn how to assess myself</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. I like to assess myself</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. The activities we did in the wiki helped me complete the Self Assessment Cards easily</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. E-portfolio helped me express my strengths and weaknesses</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. E-portfolio helped me express my likes and dislikes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. E-portfolio helped me set learning goals</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16. I myself can find the best way to learn the language</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17. I believe that the role of the teacher is to tell me what to do</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
18. I believe that the e-portfolio helped me learn how to assess myself objectively, on my own, without help.

19. The teacher should assess my progress because s/he knows best how good I am.

These are Idealus’ friends from his previous school...!!! He really liked wiki...he wants to sign in at the same time with his friends...

20. Would you like to sign in the wiki of your class at the same time with your friends?

   ☐ YES  ☐ NO  ☐ NOT SURE

21. Do you prefer traditional assessment (your teacher’s grades) or self-assessment though the e-portfolio?

   ☐ GRADES  ☐ SELF-ASSESSMENT  ☐ NEITHER

   If you chose «NEITHER», tell Idealus other ways you would like for your assessment:

22. If you had the chance, would you like to keep the e-portfolio permanently?

   ☐ YES  ☐ NO  ☐ NOT SURE

Hi, Idealus! I hope I have helped you understand what e-portfolio is and manage to make your own and win the competition in your planet!

23. I am.....

😊 😞
A boy  A girl

24. I have English lessons...
- only at school  ...not only at school

If you have English lessons outside school, what class are you in?

Id: your help!

APPENDIX II: Sample Self Assessment Cards

Sample SAC from PHASE 1

SELF ASSESSMENT CARD FOR LISTENING
NAME/DATE:........................................................................................................

SECTION A

During our previous lesson, we listened to the students of a class doing their activities in the Computer Lab.

I WAS ABLE TO UNDERSTAND ONLY SOME WORDS OF WHAT I LISTENED.

I WAS ABLE TO UNDERSTAND SOME SENTENCES OF WHAT I LISTENED.

I WAS ABLE TO UNDERSTAND ABOUT THE SUBJECTS THEY WERE TALKING ABOUT IN GENERAL.
SECTION B
LISTENING
A1 LEVEL:
I can understand simple **words** about school subjects **only** if the other speaker speaks slowly and clearly.

A2 LEVEL:
I can understand **words and sentences** about school subjects **only** if the other speaker speaks slowly and clearly.

B1 LEVEL:
I can understand the above and **some more details** about the activities the students do in a computer lab, **only** if the other speaker speaks slowly and clearly.

SECTION C
I BELIEVE I AM LEVEL:

<table>
<thead>
<tr>
<th></th>
<th>A1</th>
<th>A2</th>
<th>B1</th>
</tr>
</thead>
</table>

SECTION D
MY STRENGTHS:
For example: I can understand the general meaning of what I listen, because I don’t care about the unknown words

SECTION E
MY WEAKNESSES:
For example: I can’t guess the unknown words
I get confused by the different accent

SECTION F
MY PLAN TO OVERCOME MY DIFFICULTIES IN LISTENING:
For example: I will listen to English music more

SECTION G
AS IN A DIARY
For example: I don’t understand what I must do in this card
I liked....
I didn’t like....
APPENDIX III: Portfolio Activities Sample (Phase 1)

UNIT 1. Reading

In Unit 1 we read about Sosha, a child from Ukraine. Click on Children From Russia Spend Summers in California and read an article about the accident in Chernobyl.

- You have about 20 mins to complete the whole ACTIVITIES pack.
- If you do not have time to finish it, just do the PICK AN ANSWER & WHAT DID YOU LEARN? activities.
- Check your SCORES

ΣΤΗΝΟΣ ΟΥΤΗ ΤΗΣ ΆΨΗΣΗΣ ΕΙΝΑΙ ΝΑ ΒΕ ΒΟΜΜΕΣΙ ΝΑ ΚΑΤΑΛΑΒΕΙΣ ΠΟΣΟ ΚΑΙ ΤΑ ΚΑΤΑΦΕΡΝΕΙΣ ΣΤΟ READING.
ΣΥΜΠΛΗΡΩΜΕ ΣΤΗ ΣΩΝΕΤΑ ΣΗΜΕΙΩΝΕΙΣ ΜΕ ΕΛΕΓΚΤΙΚΑ ΤΗΝ ΚΑΡΤΑ ΑΥΤΟΕΞΩΔΟΛΩΣΗΣ ΠΟΥ ΑΣΧΟΛΟΥΝΤΑΙ ΘΑ ΚΡΙΝΙΕΣ ΝΑ ΣΥΜΠΛΗΡΩΣΕΙΣ:
1. Στο πόου έπεσε η σιβηρική καταστροφή;
2. Πώς είναι τα δυο τελείωμα της σημείωσης στο READING?
(Πώς τα καταφέρνεις; Έπειτα πρέπει να κρινιές οι σημειώσεις στο κέρατο της σημείωσης σου που δυσκολεύονται)
3. Πώς δυσκολεύονται; Τι θα κάνεις για να εξερευνήσεις τις δυσκολίες σου?
4. Γράφεις ελεύθερα τις σκέψεις σου, σαν να γράφεις σε ημερολόγιο.

ΑΥΤΟΕΞΩΔΟΛΩΣΗ_READING.doc

Details Download 118 KB
Portfolio Activities Sample (Phase 2)

UNIT 3: Reading

The aim of the following activity is to help you understand your strengths in reading. Fill in, with honesty, the following self-assessment card. You will have to say:

1. What is your level?
2. Which are your strengths in English? (Give some advice to a classmate who may have some difficulties)
3. Which are your difficulties? What do you plan to do to overcome your difficulties?

4. As in a diary, write down your thoughts.

In Unit 3 we read stories about mysterious creatures and fairies. Let's have some fun with a game.

You are a magician! You found on the Internet the recipe for a magic filter that you will use in your Magic Show tonight. The filter will change the colour of your objects! Will you make it?

First, read the clues, so as to find in the Haunted House 6 objects for your magic filter.

Use the "British council" link in the useful link, and click on the following:

Fun with English

Page 3

Haunted House Level 2.

Then, put the recipe in the correct order (from 1-5) and

YOU ARE READY FOR YOUR SHOW!

The magic ingredients
1. The skin of a green....................
2. the ...................... of a wolf
3. one toenail of a ......................
4. the tongue of a lizard
5. the legs of a .........................
6. the tentacles of an ...................

The recipe of the magic filter
...... Boil them for about 15 minutes.
...... When they are ready, try your spell.
...... Good Luck!
...... Then, put your 6 ingredients into the pot.
...... Fill in a large cooking-pot with fresh water.

Then fill in the self-assessment card.

Portfolio Activity-Reading (Phase 2)
APPENDIX IV: FIGURES

Figure 1: Implementation Procedure

In Unit 1 we listened to the students of a class, talking about different school subjects, while they were in their school lab. Click on the listening recording and listen to it again. Do the tasks of your Student's book (p. 67) again, if you need to.
Figure 2: Portfolio 2 - Listening
Figure 3. Part of the Cool 6th Graders’ Homepage & Voki Welcoming Students to the wiki

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Blogging in a blended-learning pedagogical model, as a medium for the enhancement of 6th grade primary school learners’ writing skills and e-literacies

The present research study explores the efficacy of a blended-learning or hybrid format learning environment, i.e. the combination of weblogging application with conventional face-to-face classroom tuition, in a particular EFL context. More specifically, sixth-grade Primary School learners from two different schools of the same cultural, geographical and linguistic context are involved in the act of exchanging information by means of weblogging activities. The learners involved in the present research are challenged to collaborate with a view to creating a number of stories and articles by employing the process approach to writing and after being exposed to a great variety of input material within both a computer assisted language learning environment and teacher led instructions. The emergence of new research around blogging reveals that this new form of composing on the web is growing in popularity. In this paper, there is an attempt to further explore how blogging, embedded within a blended learning framework, as a classroom scaffolding tool, could be beneficial to L2 writers while raising questions for future research. The emerging findings highlight issues concerning the EFL classroom. Particularly, they appear to reinforce our assumptions that weblogging use embedded within a hybrid framework heightens young learners’ intrinsic motivation which in turn helps enhance their writing skills, boost their metacognitive strategies, promote autonomous collaborative learning and ensure a higher level of new literacy achievement.

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However, few studies have been published that deal specifically with weblogging implementation in L2 learning contexts. Yet, a number of educators (e.g. Campbell, 2003,a,b & c; Johnson, 2004; Oravec, 2002; Wilder & Merit, 2004; Suzuki, 2004; Wu,2005 & 2006) have applied their blogs to higher education writing classes and have successfully attempted to enhance collaborative writing projects. On the other hand, a growing number of blended learning courses have been developed lately, (Sun, 2004; Johnson, 2002; Banados, 2006; Gregorio-Godeo, 2005), with promising L2 pedagogical benefits. However, here again research has taken place within a higher education or university context.

It should be stressed here that the researcher decided to explore the specific potential of students’ collaboration within the same cultural, geographical and linguistic context because this new dimension in EFL telecollaborative projects has not been exploited so far, at least to the researcher’s

Key words: weblog, blended/hybrid learning, process approach to writing, collaborative learning, metacognitive strategies, e-literacies

1. Introduction

Over the past several years, research has substantiated the benefits that computer assisted language learning (CALL) can bring to the EFL learning environment. The computer is a tool and resource which can transform traditional passive teaching into a dynamic learning process which attracts young learners’ attention. By stimulating learners’ interest and motivation a number of pedagogical benefits can be ensured, such as promotion of cooperative/ collaborative skills, language exploration and thus internalization and learner autonomy. On the other hand, face-to-face traditional courses are critical, especially in the primary classroom setting, ‘where foreign language learning needs to be organized and well-structured if it is to be effective’ (Vlachos, 2009). The present research aims to explore whether the use of a blended learning course, combining weblogging application with teacher led tuition, can enhance primary school learners’ writing skills through collaborative learning and promote their electronic literacies (e-literacies).

Despite a growing body of general research on computer mediated communication (CMC), relatively few studies have been published that deal specifically with weblogging implementation in L2 learning contexts. Yet, a number of educators (e.g. Campbell, 2003,a,b & c; Johnson, 2004; Oravec, 2002; Wilder & Merit, 2004; Suzuki, 2004; Wu,2005 & 2006) have applied their blogs to higher education writing classes and have successfully attempted to enhance collaborative writing projects. On the other hand, a growing number of blended learning courses have been developed lately, (Sun, 2004; Johnson, 2002; Banados, 2006; Gregorio-Godeo, 2005), with promising L2 pedagogical benefits. However, here again research has taken place within a higher education or university context.

It should be stressed here that the researcher decided to explore the specific potential of students’ collaboration within the same cultural, geographical and linguistic context because this new dimension in EFL telecollaborative projects has not been exploited so far, at least to the researcher’s
knowledge and, on the other hand, it is not always feasible or practical for EFL teachers to find sister classes abroad. What is more, such collaborations have been the objective of other studies in the past (e.g. Vlachos, 2006b).

This paper sets the theoretical basis for the establishment of the blended learning framework and outlines the procedure, survey tools, evaluation techniques and data analysis of the research study. Finally, this paper provides an evaluation of the findings in the light of the specific theories.

2. Theoretical framework

2.1. Blended learning

Blended learning can be defined as a teaching format that is articulated by combining online and traditional learning approaches in various degrees. A growing numbers of scholars and researchers view this educational process as an active attempt to enhance teaching and learning within a learner-centered environment (Sun, 2004; Hannafin, Hill & Land, 1997; Schwartzman & Tuttle, 2002; Cameron, 2003). Today, there is a considerable number of blended learning possibilities that the teacher can exploit in the EFL classroom. An example is the asynchronous and synchronous online communication by means of email, blogs, wikis or videoconferencing, which combined with traditional teaching methods, enables learners to develop their productive and social skills (Vlachos, 2009). Additionally, blended learning caters for the development of learners’ linguistic knowledge, communicative experiences and new literacies (ibid, p.3).

A hybrid format requires a number of pedagogical considerations to be taken into account, such as its design, its delivery, its evaluation method and interaction. Before teachers decide to implement a hybrid course, they need to consider what pedagogical benefits such a course design would bring to teaching. Needless to say, technology cannot be simply embodied in a course just for the sake of using technology. Provided that pedagogical consideration is the very essence of the teaching/learning process teachers need to align technology use with the goals and objectives of teaching. Strambi and Bouvet (2003) stress the risk of developing materials that are technologically driven but not pedagogically sound.

Another aspect that should be taken into account is time commitment. According to Johnson (2004, p.3), “managing the development time of a blended course requires a different set of instructional and project management skills than those required in a traditional course”. This entails long hours of hard work, at least at the outset of the design. Nonetheless, no matter how time-consuming such an endeavour may be, this initial requirement for more time becomes an ‘investment’ for future time saved.

2.2 New literacies

In fact, “the appearance of the Internet at schools is one of the most powerful social revolutions taking place today and at the heart of this revolution lie the new literacy skills and strategies demanded by the other ICTs” (Leu, Kinzer, Coiro & Cammack, 2004, p.8). A number of researchers (Hagood, Stevens & Reinking, 2003; Lewis & Finders, 2002) support this view reporting that intentionally or not, new literacies impact literacy instruction in classroom. This means that definitions of literacy must change to include electronic environments. According to Leu et al (2004),
new literacies include the skills, strategies and disposition that allow us to use the Internet and the other ICTs effectively to identify important questions, locate information, critically evaluate the usefulness of the information and synthesize information to answer those questions.

According to Lemke (2002), educators and policy makers are in wide agreement that children, apart from learning basic language components in the areas of syntax, grammar and phonology, will need the ability to use information technologies in order to function effectively as citizens and workers in the 21st century. Within this framework, the teacher should cater for both types of literacies.

2.3 Internet, multimedia and Web logs (blogs)

The Internet is a rapidly growing part of international communication, a teaching aid as well as a tool for interactivity in the EFL classroom (Carrier, 1997; Warschauer & Healey, 1998), which can both increase the learners’ motivation and help them enhance their computer skills, while they are learning the language (Warschauer, 1996). According to Carrier (1997, p.p.281-282), the motivational variable can be used to promote reading and writing skills at first and subsequently listening and speaking as well as the learning of vocabulary. What is more, it can teach learners how to cooperate with their classmates at school or other peers across the continents so as to become autonomous learners and effective users of the language. Chun and Plass (2000, p.p.152 -160), argue that Multimedia is a strong candidate for language learning and acquisition due to its three unique attributes, i.e., availability of authentic material, communication and collaborative capacities, and multimedia capabilities. Apart from promoting the traditional skills of reading, writing, speaking and listening, multimedia use in the EFL classroom potentially enhances proficiency in communicative discourse, i.e., coherence, cohesion and rhetorical organization, and pragmatic competence (Canale & Swain, 1980).

For Warschauer and& Meskill (2000), one way to facilitate interaction within and across discourse communities is through asynchronous communication (i.e., an application that does not require the simultaneous presence and availability of all parties involved. A form of such communication is blogging, a versatile tool with numerous applications. According to Crystal (2006, p.238) a Blog (i.e. an abbreviation of Web Log) is a web application, which allows the user to enter, display and edit posts at any time. Functioning within an asynchronous context weblogging gives students time to read, understand and respond without the pressure or real-time interaction. Dieu (2004) characterizes it as “a content management tool, which allows for many pedagogical uses, having the potential to increase students’ language competence and electronic literacy”.

A considerable number of studies have shown that collaborative learning results in better learning outcomes, compared with individual-oriented learning (Alavi, Wheeler & Valacich, 1995; Piccoli, Ahmad & Ives, 2001; Wu, Bieber, Hilz & Han, 2004). Blogging, as a communication tool, has extended the range of opportunities offered to students for collaborative work. According to relevant literature (Du & Wagner, 2005; Lamshed, Berry & Armstrong, 2002), blogs have the capacity to engage learners in collaborative activity, knowledge sharing, interaction, reflection and debate, capabilities that are explored in the present research.

Essentially, by instigating cooperation within a ‘local community’, i.e., classmates in the same classroom, for a specific real audience, or else a ‘global community’ (Sun, 2004), as happens in our case study, authenticity of task and purpose is ensured. Research in rhetoric and composition
pedagogy cites writer’s understanding of his/her audience as crucial to effective writing and communication of ideas, (Ede, 1984; Elbow, 1987; Park, 1986; Harrison, 2006), to name but a few. Weblogging, in particular, being a form of micro-publishing (Suzuki, 2006, p.3), succeeds in raising awareness of audience. Such awareness makes learners concerned about the formulation and presentation of their written texts.

Through peer interaction mediated by weblogging, learners are directed to “collaboratively discover and construct context that they can support and justify” (Furstenberg 1997, p.24). Such collaborative purposeful language discovery and use stimulates “more interaction that results in a higher level of thinking” (Hertz-Lazarowitz 1992, cited in Coit 2006). Actually, experimenting with the language, learners become more motivated to perform better and be supportive of their group mates, as they cooperate towards the achievement of a common outcome. Filtering the input, they are motivated to exercise their higher order thinking skills and eventually refine their thoughts with a view to creating a challenging task for their distant classmates.

2.4 The productive skill of writing

Writing is a highly demanding, meticulous and complex process involving a range of skills. Risk-taking language experimentation (Raimes, 1985) is what makes writing an active way of learning. It does not only demand thinking but is also a means of thinking, which can encourage learner development (Krashen 2004). Research in the cognitive processes of writing has indicated that through practice, learners are able to become more proficient writers (Hayes & Flower, 1980). Writing, involving constant checking for appropriateness and correctness is experienced by young learners as an unnatural and thus becomes a frustrating act. Nonetheless, this skill can be less daunting if it is perceived as a creative process. This can be achieved by means of creating a teaching/learning environment where learners are supported to experiment with the language and plan, draft, evaluate and revise before they edit their final product (White & Arndt 1991, p.p. 5-6). This trait of recursiveness, (i.e., moving backwards or forwards in the piece of writing being developed), can stimulate easier, different and, hopefully, better writing (Pennington, 1996b, p.125).

Regarding the aspect of feedback exchange among students, more recent research in the field of process writing has led to the discovery that learners’ social and interpersonal skills can be rehearsed as they learn to take the perspective of another, which is critical to social maturity (Hillocks, 1982; Ferris, 1997; Chandler, 2003). Furthermore, research has proved that knowledge of topic, purpose and audience can motivate learners to view writing as a meaningful form of communication and thus prompt their active and successful involvement in the process of writing (Cameron, 2001; White & Arndt, 1991).

Successful L2 writing focuses not only on meaning and rhetorical organisation but also on linguistic features (Widdowson 1983; Arndt 1987). Attention to accuracy leads to successful written communication, i.e., fluency, provided that the teacher can foster awareness of effective techniques for matching content with form.

Another principle of writing pedagogy refers to the generation of whole texts. By motivating children to construct whole texts they learn to write cohesively and in a manner appropriate to the communicative goal of the text produced (Hedge, 1988, 2005; Byrne 1988). A criterion that is also applicable to the early stages is the students’ sufficient exposure to and reflection on examples of
text-types (genres) before they are asked to produce a similar one. The significance of learners’
introduction to a variety of rhetorical organization, which characterizes different kinds of discourse,
is cited in much of the literature (Ammon, 1985; Byrne, 1988; Harmer, 1983; Raimes, 1983; Zamel,
1985; Widdowson, 1983).

Current research has offered enlightening evidence regarding integration of skills. It holds that young
learners (YL) should be taught a linguistic skill with a view to developing command of L2, by means of
close adherence to integration with the rest skills (Krashen, 1984, Wingard, 1981; Ammon, 1985;
Byrne, 1998; Widdowson, 1983; Raimes 1983).

Being a highly complex skill, writing must be learned. Process writing practitioners consider that the
“intellectual thinking process which precedes writing” (Spack, 1984, p.664) can be structured and
taught, provided that young learners are not competent in mentally organizing ideas and
simultaneously getting them down on paper coherently. According to Chomsky’s nativist theory,
(Brewster, Ellis & Girard, 1992, p.31), children gradually create language for themselves. Therefore,
YL need plentiful opportunities to experiment with the language by means of ‘higher- risk
tasks’. Stimulation of purposeful language discovery and use reflects learner-centred teaching in
which, according to Brewster et al (ibid, p.29), the aim is to engage learners to take responsibility for
learning by developing their autonomy.

3. The research study

Data was drawn from two separate groups of participants attending two primary schools in the area
of Patras (target learners and collaborative class or distant classmates, hereafter). The researcher
was the teacher of the target learners in a Primary School. The collaborative teacher of English in a
Primary school supervised the experimental procedure in the second school and provided all the
necessary information to the researcher, on a constant basis.

The majority of the target students, 24 in total (14 boys and 10 girls), having moved towards the
‘manipulation’ stage’ (Garvie, 1995, p.117), were expected to participate in ‘higher-risk activities’. Their
linguistic competence level to be achieved through the teaching sessions was determined in
line with the levels of the specifications of the Common European Framework of Reference (CEFR,
2002). As far as their e-literacies are concerned, learners were confined to knowledge on the basic
functions of the computer, handling the keyboard as well as Internet navigation skills in order to
access a website.

3.1 The procedure, the tools of survey and the evaluation techniques

Both schools being equipped with a computer lab, they were enabled to build up an asynchronous
type of authentic communication. Learners, who did not know one another, interacted through
communicative activities, exchanged information with a view to creating a common qualitative
language output, i.e., stories and articles, by means of blogging. Both teachers followed the same
teaching procedure, shared the same material and evaluated their learners’ improvement throughout the teaching instructions, relying on particular assessment methods. Our research falls
into two basic styles which are objective and subjective or ‘nomothetic and idiographic’ (Swetnam,
2000). The objective approaches concerned universally applicable rules tested through hypothesis,
experiment and survey, whereas the subjective approaches dealt with the behaviours of the target
learners through observation. Specifically, the means of data collection undertaken before designing the supplementary work units was a comprehensive needs analysis questionnaire, as well as two placement tests completed by learners cooperating in groups. These writing tests served as a basis to identify both their level of proficiency regarding the genres of narrative and article making and their willingness to cooperate. They were marked against an analytic performance scale which separated the following criteria in order to ensure evaluation objectivity: accuracy, appropriacy, communicative ability/quality and text organization.

The effectiveness of the proposed materials was evaluated by means of in-class assessment procedures. During the implementation of the blended learning course a number of alternative assessment approaches were employed appropriate for the young learners, ‘whose cognitive and linguistic state is still developing’ (Smith, 1995, p.4). They were of various forms and included:

- Teacher observations
- Unstructured and semi-structured interviews
- Record keeping sheets
- Analytic performance scales and
- A post-meant questionnaire

The participants, divided in groups, were involved in various writing tasks, which demanded integration of all four traditional language skills by means of face-to-face tuition, as well as incorporation of computer assisted language learning. More specifically, the designed program consisted of two work units, each of which was broken into consecutive teaching sessions. In the first work unit the learners’ main writing task was the creation of a story, based on a series of pictures and a number of clue. In the second one, the children were challenged to generate an article relying upon the information they gathered by means of an interview they themselves prepared for Vaggelis Heliopoulos, one of their favourite authors. The final products were posted to the classroom blog, so that meaningful interaction between the two collaborative schools would be established. For the generation of the written texts the learners employed the process approach to writing, utilized the word processor’s facilities, whilst they took advantage of web possibilities and multimedia capabilities.

### 3.2 Data Analysis

Data were analysed by means of the Statistical Package in Social Sciences (SPSS v.17.0). The analysis of the questionnaires was based on two axes. The first one was related to ‘chi-square test’ (Howell, 1997) in order to test the null hypothesis that the frequency distribution of certain events observed in a sample is consistent with a particular theoretical distribution. Besides, the events considered were mutually exclusive and had total probability 1. A common case for this is where each event covers an outcome of a categorical variable. The second axis used for our statistical analysis, comprises the mean ranks calculation. Mean ranks were calculated using the nonparametric Friedman test (Kinnear & Gray, 2000), which was selected for comparing observations repeated on the same subjects. This is also called a non-parametric randomized block analysis of variance. We resorted to a non-parametric test since it makes no assumptions about the distribution of the data, e.g., normality.
4. Presentation and analysis of the research instruments

4.1 The comprehensive needs analysis questionnaire

Learners are key participants in syllabus adaptation frameworks and before their implementation it is of crucial importance for designers to collect information in terms of their background knowledge, needs and interests (O’Brien, 2000). In our research study, the first tool of data collection was a comprehensive needs analysis questionnaire. In most of the questions learners were provided with a variety of responses to choose, so as to secure true answers. The questions posed were based on Hutchinson and Waters’ (cited in O’Brien ibid, unit 7) needs classification. They talked about ‘lacks’, i.e., what the learners knew was compared with what they needed to know, and ‘needs’, meaning what the learners felt they needed, ‘learning strategies’ that referred to the ways in which learners preferred to learn, and ‘necessities’, i.e., what learners needed to know in order to function communicatively in the situations in which they would find themselves.

Although not clear from its format, the questionnaire was roughly divided in three sections. The first four (4) questions aimed at detecting the learners’ attitude towards learning English in general and at their school in particular, while questions six to ten (6-10) focused on the skill of writing, revolving around writing habits, strategies and preferences. The purpose of investigating this area was to explore learners’ affective attitude towards writing in L2, assess their level of competence in this skill, identify patterns of student interaction, and detect any difficulties they experience while being involved in such a task. Question eleven (11) included all the above issues reformulated so as to secure reliability of answers, whereas the rest ones concerned learners’ familiarity with computers. An additional variable was generated at the end of the questionnaire to capture learners’ view on what could make the teaching of L2 writing more interesting and challenging.

Moving on to the specific data analysis, we will refer to three aspects, i.e., the skill of writing, collaborative autonomous learning and e-literacies. A chi-square test of goodness-of-fit was performed to detect target learners’ view regarding their writing experience in English. Their answers did not present any differentiation. Although writing is generally regarded as a highly demanding cognitive process, this did not arise from the statistical analysis ($x^2=6.73; df=3; p>.05$). In spite of this, learners appeared fully aware of the difficulties the writing process entails, as they were able to locate the parameters that inhibited their writing fluency. From variable 8 analysis, we can deduce that they had difficulty in composing sentences, in coming up with suitable vocabulary, as well as in spelling ($x^2=14; df=5; p<.05$ and $x^2=11.82; df=5; p<.05$ respectively). In contrast, the answers elicited from the question concerning the process of writing, disclosed target learners’ ignorance of an accommodating method ($x^2=3.03; df=3; ns$). The Friedman test was selected for comparing observations regarding learners’ preferences for genres (Var.6). Mean ranks revealed significant differences across choices ($x^2=27.72; df=5; p<.001$), as the majority demonstrated a marked preference for writing stories.

Regarding the issue of correction practices (Var.10, answers illustrated that learners did not have a particular preference ($x^2=5.1; df=5; ns$, i.e. non significant). Yet, examining only girls’ responses resulting data, seemed to considerably change ($x^2=8.76; df=3; p<.05$), as girls were keen on discussing mistakes in groups with teacher’s help. Likewise, their preferences about individual or group work did not appear to present significant differentiation, whilst they did not object to having their work corrected by their classmates ($x^2=1.75; df=2; ns$ and $x^2=1.75; df=2; ns$, respectively, (Vars. 188
Furthermore, the analysis revealed that not only did learners enjoy correcting their classmates’ work (var.11f, ), as such practice would make them feel more involved in the learning process ($x^2=10,75$; df=2; p<.01), but they also took pleasure in having in having their own work read by others (Var. h: $x^2=19,33$; df=2; p<.001). Concerning integration of computers in the English class (Vars.11 c & d ), they responded positively supporting that they prefer CALL to traditional teaching practices ($x^2=36,75$; df=2; p< .001 and $x^2=10,75$; df=2; p<.01 respectively).

Additionally, the learners’ responses to question 16, i.e., how far they agree with the idea of using the computer in their English class, seemed to fully vindicate the teacher’s choice for designing a blended learning framework incorporating computers. The majority strenuously argued for such integration, as they were certain that in a CALL environment their English classes would be more interesting and much easier ($x^2=19;df=2;p<.001$ their own work read by others (Var. h, : $x^2=19,33$; df=2; p<.001). The target learners’ desire to utilize new technologies in the learning process was further reinforced by the fact that they already used computers at home (Var. 12,: $x^2=6; df=1;p<05$), primarily for playing computer games (Var. 13, : $x^2=18,92$; df=4; p< .005), or for surfing the web ($x^2=12 ; df=5$; p<.05).

Another remarkable finding (Var.17 a,) was that learners felt confident about developing more robust e-literacy skills while using the computer as a conduit for carrying out an EFL task ($x^2=9,75$; df=2; p<.01). They also believed that working within a computer assisted language learning context would help them both improve their writing skills ($x^2= 27,33$; df=2; p<.001: Var. 17 c & d, ) and exhibit reading fluency ($x^2=9,25$; df=2; p<.05 : Var. 17 b). On the other hand they did not seem to be certain regarding the enhancement of their listening skill (Var 17 ).

Finally, a high percentage of learners would like to use the computer in their EFL class for completing their writing tasks ($x^2=24,5$; df=5; p<.001), as evaluated in variable 18 (App. II, p. 178).

### 4.2 The Post-Meant questionnaire

The purpose was to gather information on the learners’ attitudes regarding communicative collaboration, learner autonomy, the writing skills and strategies they had built and the competences and the new literacies they had constructed within this specific hybrid framework. More specifically, the first three (3) variables explored the use of blog as:

- a medium for facilitating learning, where students provided a unanimously positive answer regarding its beneficial effects on their learning (Var. 1, )
- a means for student interactivity, where children’s responses noticeably showed that the blog increased the level of meaningful exchange between them and their classmates (Var. 2, $x^2=20,17$; df=1; p<.001), and
- an educational tool of reflection, which helped them reflect on its potential regarding new-literacies achievement (Var.3, $x^2=20,17$; df=1; p<.001).

Questions 5-9 (, on the other hand, referred to the efficacy of the specific blended learning course in terms of
- autonomous learning enhancement and metacognition
- face-to-face workshops and collaborative learning effectiveness
• learning goals achievement, highlighting the improvement of writing skills, and
• new-literacies acquisition.

To start with, responses to variable 5, i.e., blended-learning and development of autonomy, demonstrated that learners set a high value on the hybrid format taught, as it enabled them to resume the role of risk takers and thus take charge of their own learning ($x^2=16.67; df=1; p<.001$). They had also discovered that computer integration in their learning process helped towards developing their linguistic abilities ($Var5/b, x^2=12.25; df=2; p<.005$).

On the other hand, their level of motivation with regards to learning English had also experienced a positive change as a result of the CMC, as shown in variable 5/ c ($x^2=20.17; df=1; p<.001$). Additionally, it is important to note that the participants expressed their high satisfaction about their active involvement in the suggested blended learning experience ($Var. 5 /d, x^2=20.17; df=1; p<.001$). Likewise, the target learners were certain that they had ultimately benefited from the face-to-face tuition ($Var. 5/e$). Clarifications of doubts while handling the activities set assisted them in comprehending those linguistic points that were important for their writing tasks ($x^2=13.5; df=1; p<.001$).

A remarkable finding concerns the interaction that the learners had during conversational classes as well as the feedback provided by the teacher (Variables 5/ g, h & i). They believed that using L2 for communication purposes while dealing with the tasks helped towards minimizing their anxiety ($Var. 5g, x^2=31.75; df=2; p<.001$). The teacher’s provision of feedback on the other hand, having been gentle and to the point, seemed to have reinforced metacognition ($Var. 5h, x^2=19.75; df=2; p<.001$). An overwhelming percentage of participants claimed that knowing the existence of a real audience motivated them towards trying harder with their writing ($Var. 5/i, x^2=20.17; df=1; p<.001$).

The positive effects of this teaching method were further heightened by the learners’ responses referring to the achievement of the learning goals (5/k-m). They felt confident regarding the improvement of their writing skills ($Var. k, x^2=16.67; df=1; p<.001$), mainly due to the computer use ($Var.5/i, x^2=14.25; df=2; p<.005$), as well as of the rest language skills ($Var. m, x^2=9.75; df=2; p<.01$). This last finding seems to contradict their former belief, which was expressed in the needs analysis questionnaire where they supported that the skill of listening could not be reinforced by CMC. Furthermore, an almost unanimous response was provided regarding the improvement of their e-literacies ($Var. 5/n; x^2=13.5; df=1; p<.001$). Regarding time allotment ($Var. 5/o$) learners felt that although carrying out the tasks by means of the computer demanded more time than in the traditional classes, it was worth the time spent ($x^2=20.17; df=1; p<.001$).

Analysis of variables 6 and 9 (which both referred to the pupils’ opinion regarding the implementation of the particular blended-learning course), illustrated how useful and interesting the blended learning course had proved ($Var. 6: x^2=9.25; df=2; p<.05$). Target learners felt so much benefited that they wished they could be involved in similar teaching practices in the future ($Var. 9: x^2=20.17; df=1; p<.001$), not only in the English lesson but also in all school subjects. In addition, the Friedman mean rank analysis demonstrated that the most interesting and valuable stage during this course implementation was collaboration with the distant classmates through blogging tasks ($Var 7, x^2=93.37; df=8; p<.001$). Finally, statistical analysis could not be implemented for question 8 as its variables were consistent. The learners chose the ‘most fun’ option, fact that further reinforces the extent to which they enjoyed the stages followed during the application of the two work units.
5. The findings of the research: discussion and evaluation

5.1 Writing: the process and the product

As it has already been supported, making learners aware of the fact that their postings were going to be published, read and responded by an authentic “global audience” (collaborative class), was enough to make them concerned about content appropriacy and language accuracy of their texts, as their responses in the post-meant questionnaire also illustrated (Var. 5/j). During observations there were cases that participants took their responsibility quite seriously, whereas the teacher encouraged them to write at the best of their ability. Active cognitive processing was noticed when learners attempted to make sense of the input information in order to create new material. Indeed product evaluation confirmed both the teacher’s comments and the students’ replies to the questionnaire. Additionally, in our interviews many students commented on the good experience they gained while writing for an authentic public, even for this limited community.

Another relevant striking finding concerned the learners’ discovery that they should respond to meaning first and to form in later drafts. This implies that they were made aware of the benefits of the process approach, which is highly likely to lead them towards gaining competence in L2 writing. It is true that at the outset of the endeavour, i.e., in the second teaching session of the first work unit, as soon as the learners were provided with the material they set about writing the story paying particular attention to form. The teacher advised them to follow instructions carefully and note down ideas regarding the sequence of pictures ignoring linguistic errors. At the beginning, they seemed confused. To alleviate this stressful situation the teacher held short clarification sessions with each group separately. Gradually, things started flowing more easily.

Concerning the next stage of the process approach, i.e., reciprocal peer tutoring, again in the first teaching sessions they seemed to experience a number of difficulties, as it was almost permanently tied to those learners with greater linguistic or content knowledge. In the private discussions or unstructured interviews they admitted that, initially, they had felt fairly uncertain about the validity of their group mates’ responses. Nevertheless, as lessons progressed, peer tutoring was gradually emerging quite naturally out of the handling of the tasks as it passed from participant to participant (vars.5/g & B/a, b, c). Session after session there was an effort on the teacher’s part to cultivate all the learners’ strategies for offering meaningful feedback. The teacher tried to focus their attention on what to look for and how to evaluate it, which in turn helped them become knowledgeable enough to make worthwhile comments about their work. Yet, when it came to the final stage of editing/proofreading greater competence in L2 or greater experience in word-processing did predispose one or the other individual for the leader’s role. As a whole, peer review appeared to have empowered learners to become active, critical readers “looking for characteristics that make texts powerful and features that may hinder” as Coit (2006, p.98) has also detected in one of her studies. The target learners involved in the weblogging writing tasks, with the teacher’s aid, were observed to be negotiating a number of discourse features, which in turn generated linguistic modifications. On the other hand, the learners were aware of the fact that the teacher was the final evaluator and therefore, they knew they were not truly responsible for the corrections they made. To do justice to them, however, we should admit that it was fair enough, as we had to do with primary school learners who could easily come up with false repairs and missed corrections.

As far as the final writing product itself is concerned, the blended-learning format appeared to have
different levels of impact on groups. In the first work unit, evaluation of their final products, i.e., stories, demonstrated that more competent learners benefited most. However, it was evident that they did not perform uniformly throughout the experiment, since the first application appeared to be a learning period. As time progressed and learners were gradually provided with ample practice and training in order to understand what appropriate genre they had to deal with, analysis of their writing data provided a powerful illustration that even less able learners managed to do their best. Yet, a handful of learners, (four students who were spread along the groups), entirely failed to respond to peer and teacher feedback provided during the evaluation stages of the first work unit, mainly due to their English competence. There was an effort to surmount this type of hindrance by providing encouragement and additional grammar and vocabulary exercises. No matter how short the time span of that extra teaching was, these learners managed at least to discard their frustration and in the second work unit they were noticed being at pains to participate. It goes without saying, however, that weak learners need well-structured and longer-term sessions to help them gradually gain adequate linguistic knowledge, lexical mastery and syntactic patterns to successfully deal with a more complicated writing process.

The most widely praised feature of the blogs was that the process of writing postings focused on the target learners’ thinking. It encouraged them to develop critical thinking skills needed to analyze, review and revise their writing and, consequently, their own learning (Leki, 1990; Zhang, 1995). The learners made conscientious efforts to filter the information and feedback being provided in face-to-face classes and record it successfully onto their writing products. Actually, it was felt as a process of learning how to effectively handle writing from close collaboration and content negotiation in a computer-aided environment. The learners themselves admitted taking pleasure in seeing their writing skills improve (var. 5/k). As the collaborating teacher also reported, the students’ writing skills seemed to show signs of constant improvement. By challenging the learners to get involved in the tasks of creating their own stories and articles following the multi drafting and peer evaluation stages, they were able to generate ideas and construct written thoughts more easily, and increased their abilities to write more coherent and unified texts. Evaluation of both drafts and final products confirmed her comments. It would be wise to stress here the absence of “rules in the sense of universally agreed modes of behaviour established by generation of usage” (Crystal, 2006, p. 16) regarding communication via weblogging. It stands to reason that in our case study, teacher and learners adhered to the widespread conventions underlying story and article creation, knowledge that is routinely taught at schools and upon which the teacher aimed to focus.

In all, it can be supported that the specific networking writing tasks, the capability of presenting information nonlinearly in multiple modes, and last but not least the face -to-face teacher led instructions seemed to have enhanced proficiency in communicative discourse (cohesion, coherence, rhetorical organization) and strengthened pragmatic competence, i.e., ability to effectively communicate complex meanings in writing.

5.2 Collaborative autonomous learning and motivation

In-class face-to-face assessment also showed another dynamic that was noticed in the cooperative/collaborative part of the teaching practice. Overall, the hybrid environment allowed for high-level of collaborative learning to take place. It seemed to reflect Hedge’s (1988, pp.11) view,
which holds that group composition transforms the classroom into a writing workshop where meaningful discussion and a number of activities are generated through collaborative writing which, in turn encourage an effective process of writing. Indeed, the learners, in most of the cases, were able to arrive at a consensus regarding the content of both the stories and the articles, to plan a series of intermediate stages, to support each other in the accomplishment of the task and to achieve the task objective. What is more, the target learners found that collaboration with a partner class via blogging was a powerful opportunity to use the language meaningfully, and that this form of active participation, although novel at first, became a great source of motivation (var. 5/c). According to the teacher of the distant classmates, blogging activities offered various possible advantages in the domain of communicative collaboration.

Moreover, the current research provided a powerful illustration that learners adopted a more positive attitude towards the teacher realizing that they did not have to entirely depend on the teacher’s support in order to successfully complete their assignments (var. 5/a). The teacher functioned as a supporter rather than a sole conduit for conveying knowledge, fact that helped towards their gradual autonomy. The majority enjoyed the autonomy they experienced in undertaking activities, which led them to discover aspects of English that became part of their individual developing confidence. Weak students with a negative attitude towards cooperation in the beginning, also reported that working on the computer in collaboration with their classmates did a great deal to strengthen their confidence with communication in English (var. 5/g.). The validity of these findings was also increased by the interviews, which were carried out at the end of each work unit.

To a great extent, the blended learning format utilized played a key role in bringing about new ways of using and thinking about language, especially in terms of learner autonomy, student to student collaboration, and electronic fluency (vars. 5a &b, 6, & 8.).

5.3 CMC, weblog and new-literacies

As the findings highlight, all the students developed, at least, basic literacy with word-processing, blogging and the web. It also heightened their intrinsic motivation and not surprisingly, the majority of the learners announced that, from then on, they indented to use their computers at home more frequently and for a variety of activities, “practice that will definitely help them develop more robust skills in using common tools, different communications and web tools” as Warschauer and Kern (2000), put forward. Before the proposed hybrid teaching framework was put into effect, the children reported using the computer at home only for recreational reasons (Var. 12.). It was, then, a great satisfaction for the teacher to discover that activities of this sort encouraged the use of the computer for educational purposes.

Initially, learners viewed work on computers as a procedure completely different and irrelevant of the main purpose of the class. Nonetheless, as the blended classes progressed and students experienced the use of the Internet, they saw new electronic literacies as complementing and contributing to their learning purposes. Both individual student observation and the post observation interviews indicated that even the inexperienced learners acquired the necessary skills quickly and easily. They appeared to have developed functional skills in using search engines and functional literacy with word processing features. They also exhibited fluency in locating, navigating and using their classroom blog. Even the limited number of students who did not use computers much, they
seemed to get around it quite efficiently. As they reported, at the end of the work units they were able to demonstrate a level of personal confidence in their own computing skills (Var.5/n). 

The use of multimedia environment, on the other hand (e.g., story-telling video and recorded interview), facilitated both the interactions among the learners and the interaction of the learners with authentic material in the web environment (e.g., authors’ interviews, actor’s biography) and enhanced the ‘learning-as-knowledge- construction’ process (Chun & Plass, 2000). Their authentic engagement, which in turn resulted in acquainting them with digital literacies and gradually making them information technology literate, was also apparent by the fact that they longed for the moment their interpersonal communication with the collaborative class, via webblogging, would initiate. By and large, the learners were evidenced to express themselves in a positive relaxed manner suggesting a high degree of ease and enjoyment with blogging and other computer tasks. E-literacy achievement was also observed by the collaborating teacher who reported that her students being genuinely involved in the tasks started to expand their fluency with computers.

Taking all the above into account it should be stressed that exploring the specific potential of students’ collaboration within the same cultural, geographical and linguistic context proved to be pretty effective and worthwhile.

6. Conclusion

In the present study we argued for the various merits of a blended learning course applied to a primary school setting. We asserted that webblogging practice, embedded within a face-to-face tutorial, establishes a favourable collaborative environment, which in turn enhances young learners’ writing skills and metacognition, and guides to learner autonomy. Last but not least, we maintained that blended learning plays a critical role in new literacy achievement.

Considering the positive results of the experience dealing with blended learning in the particular 6th grade primary school setting, experiments like this might be used as a starting point for the implementation of similar but farther-sighted and longer-range courses in primary education. Blogging in particular, the omnipresence of which is an indisputable fact in the emerging technology (Wu, 2005), can be considered a viable learning tool to developing language and writing skills, provided its exploitation is based on a well-organized instructional design. ‘To capitalize on blogging’s learning and teaching potential simply unleash your imagination’, Dieu (2004) recommends.

To sum up, incorporating traditional teaching frameworks with current technology can be viewed as an active attempt on the teacher’s behalf to enhance teaching and learning. Education today needs to foster a variety of new types of literacy to empower learners and to be relevant to the challenges of the present and future. Nevertheless, nowadays there is little incentive for teachers to make new technologies a central part of the curriculum until these are included in national standards, as Leu et al (2004) admit. “Today that technology has found its way into virtually every corner of the society and has accompanied the growth of youth in their every day life” (Sun, 2004, p.1), there is a sense of urgency in ensuring such integration.
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Integrating Computer Mediated Communication (CMC) and online networking in the teaching of English as a foreign language in high school

Ενσωματώνοντας την επικοινωνία μέσω ηλεκτρονικού υπολογιστή και την κοινωνική διαδικτύωση στη διδασκαλία των Αγγλικών ως ξένης γλώσσας στο λύκειο

Efthymia KOUFADI

Within the Greek Senior High School ELT context, the present study aims at exploring Computer-Mediated Communication’s (CMC) widely-acknowledged 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.

Key words: Computer-Mediated Communication, Web 2.0 technologies, Wiki, motivation, higher-order thinking skills, intercultural communicative competence, autonomy.
1. Introduction

New technologies and the Internet have emerged as a prominent and well established part of contemporary societies. Their increased prominence has pervaded all aspects of life ranging from academia to entertainment. Undoubtedly, their advent changes the way we traditionally perceive education, sparking new dimensions to Foreign Language Learning (FLL). A gradual shift from employing online communication as a pedagogical tool towards seeing it as a legitimate medium of literacy and communication in its own right is now paved through (Warschauer, 1999; Warschauer, 2001; Warschauer & Kern, 2000; Warschauer & Meskill, 2000). The role of educational technology has gradually been transformed from that of a tutor to that of a tool (Warschauer, 1996). Towards this direction, CMC and Network-Based Language Teaching (NTBL) do not anymore constitute teaching methods but a constellation of ways of communication among students acting as active members of online discourse communities (Vlachos, 2006a&b).

Many scholars have underlined both the pedagogical and language learning benefits to be reaped from the integration of online networking (Davis et al, 1997; Fustenberg, 1997; Kotter, 2003; Lin Ho, 2000; Meloni et al., 2001; Skourtou & Kourtis-Kazoullis, 2002; Zamel, 1985). Relevant literature and studies conducted worldwide suggest a pattern of positive effects on students’ attitudes, skills development, motivation and engagement, learners’ computer literacy and equally importantly on the creation of a positive, anxiety-free classroom atmosphere (Blake, 2000; Felix, 2005; Lin Ho, 2000; Liu et al, 2002; Singhal, 1998; Zeiss & Garcia, 2005; Zeng & Takatsuka, 2009). Positive findings have also been reported on the development of cultural awareness and intercultural communicative competence (ICC) (Abrams, 2002; Belz, 2002; 2003; Kellner, 2005; Osnara, 2002; Sellami, 2000; Vlachos, 2007 & 2010).

However, although a sufficient amount of research has been contacted worldwide on the field in question, in the Greek educational context, it still constitutes a novice practice (Skourtou, 2002; Vlachos, 2006b; Daskalogiannaki, 2011; Drakopoulou, 2010; Vranos, 2009). To the best of my knowledge, very limited research has investigated so far the effect of CMC through the use of a wiki-technology in a Greek learning context (Georgopoulou, 2012; Mpakola, 2012). Serving current research needs, this study explores the potential of wikis in the Foreign Language Learning (FLL) process in Greek State secondary education towards the enhancement of motivation, higher-order thinking, 21st-century skills development, learner autonomy and Intercultural Communicative Awareness and Competence.

Towards this direction an intercultural project, upon which the particular research is based, was designed and implemented. The project entailed an online collaboration between two different-nation groups on a wiki where students collected and exchanged information on mutually agreed topics concerning their life and culture. A Greek group of twenty two 15 to 16 year-old students attending the first and second grade of High school in Kaparelli of Viotia and a German group of fifteen students of the same age attending the ‘Städtische Realschule Sodingen’ in Herne formed the participant groups.

2. Web 2.0 Technologies in education

Web 2.0 technologies have become a well-established part of our and mostly our students’ life. However, a common criticism often expressed against computer use in the educational
process pertains to its anti-social nature (Pennington, 1996:10). Still, the very fact that social sites like *youtube*, *Myspace*, *Facebook* and *Twitter* are gaining growing popularity among youngsters proves exactly the opposite (McLoughlin & Lee, 2007; Pempkt et al., 2009; Wu & Hsu, 2011); CMC has introduced a new era of digital socialization (Downes, 2004; Lenhart & Madden, 2005). The answer as to why young people engage in such a mode of communication may lie in the ease of use and the urge to connect and share (Wu, 2005, cited in Anderson, 2006). Immediacy, interactivity and the opportunity to present self-identity render web 2.0 tools useful and enjoyable media of communication, influencing positively learners’ motivational levels and encouraging them to improve their literacy level (Arthur et al., 2006; Lin & Lu, 2011; Mazer et al., 2007; Pempkt et al., 2009).

### 2.1 Literacy in the 21st century

The emergence of “Web 2.0” technologies create a new set of dynamics, putting at the forefront discussions on pedagogical transformation (Lee & McLoughlin, 2007). Traditional approaches to teaching have outlived their times. The growth in popularity of social computing applications necessitates changes in pedagogy towards greater learner control, agency, peer-to-peer sharing and Learner-Generated Content (LGC) (O’Reilly, 2005; Williams & Jacobs, 2004). New affordances of Web 2.0 are now making learner-centred education a reality and a shift is initiated away from the production of web content by “authoritative” sources towards content generated by users themselves (Cross, 2006; Karren, 2006; Lee, 2000; Rosen, 2006). The notion of “students as audience” gave way to “students as producers” indicating greater autonomy and creativity (Klamma et al., 2007; Lenhart & Madden, 2005). The traditional notion of “literacy”, also known as “foundational literacies” (Vlachos, 2009) though crucial, falls short to meet the requirements of the rapidly changing information and communication societies. To keep pace, foreign language pedagogists should live up to current societal requirements and pave the way for the development of “new literacies”.

“New literacies” expand the language-based view of literacy to take into account the diverse linguistic and cultural makeup of contemporary societies. As a term it refers to knowledge, skills and strategies students progressively built in order to be able to adapt to the changing ICT learning contexts to enhance their understanding of topics and issues (Bruce, 2003; Guth & Helm, 2010 & 2012; Lamy & Hampel, 2007; Leu et al., 2004; New London Group, 1996, 2000; Vlachos, 2006a & 2010).

So what is literacy after all? It appears to be a shifting target; In the Web-era, we cannot but admit that the ability to read, write, and communicate effectively over computer networks is the cornerstone of success in all spheres of life. Our main challenge is ‘to prepare our students for their future rather than their past’ (Shetzer & Warshauer, 2000).

### 2.2 The Sociocultural approach and the three Metaphors of Learning

Computer Assisted Language Learning (CALL) has been at the forefront of foreign language education since ‘80s. Nowadays, however, a socio-cognitive approach to CALL (Vlachos & Papaefthymiou-Lytra, 2008) and the intercultural theory reinforced by the ‘participation’ and ‘knowledge creation’ metaphors of learning are being promoted as pedagogical models, thus a short allusion would be interesting and wise.
As widely known, the sociocognitive and sociocultural approaches emphasize the social and cultural aspects of language acquisition achieved through the socialization into particular discourse communities and sociocultural environments (Gee, 1996; Kasper, 2001; Norton & Gao, 2008; Schieffelin & Ochs, 1986; Wu & Hsu, 2011). Learners are treated as individuals and social beings; as independent and interdependent, who construct meaning and discover learning through experience (experiential learning), interaction and collaboration. The vast interactive medium of the Internet and Social Networking Sites (SNS) undoubtedly exhibit great potential for self-expression, community participation, and knowledge sharing (Byram, 1999; Guth & Helm, 2012; O'Dowd, 2007); hence the remarkable enthusiasm observed lately for employing computer networks in the language classroom.

Learning with social software tools, though, compels us to consider how Web 2.0 tools and interconnectedness impact on language pedagogy. Sfard (1998) distinguishes between two metaphors of learning, namely, the ‘acquisition metaphor’ and the ‘participation metaphor’. The former represents the traditional mode of teaching and the receptive view to learning. Alternatively, the latter conceptualizes learning as a process of participating in multiple networks of cultural and shared learning practices. The focus shifts from the outcomes and products to the process itself. By adopting a participation metaphor, students engage in social processes of knowledge construction which resonate the previously discussed sociocultural theory (Brown et al., 1989).

Nowadays, however, learners take control of their learning by creating and generating ideas, concepts, and knowledge, by making connections, and producing new insights through inquiry. The question that arguably arises is “Can we still conceptualize learning as acquisition or participation?” In order to keep pace with the Net Generation, Paavola and Hakkarainen (2005) propose the ‘knowledge creation metaphor’ (Figure 1). Within this conceptualization, learning is acquired by becoming part of a community, through the creation and contribution of learning resources. Students, both consumers and producers (“prosumers”), do not only acquire knowledge and skills through their interaction with experts, but they now take the responsibility of contributing to the advancement of the community’s existing body of knowledge (Eustace & Hay, 2000; Lee et al., 2005). The knowledge creation paradigm is in accordance with the digital affordances since learners take up roles of creative generators of ideas, resources and knowledge (Lee & McLoughlin, 2007).

![Figure 1: Three metaphors of Learning (Paavola & Hakkarainen, 2005)]


### 2.3 The potential benefits of Web 2.0 tools and the wiki

Research has shown that NBLT promotes learners’ intrinsic motivation, as it allows real-world communication upon topics beyond classroom-based ones (Dornyei, 2001a&b & 2003; Fox, 1998; Kern & Warschauer, 2000; Meloni et al., 2001; Vlachos, 2006a&b Warschauer & Grimes, 2007) thus the decontextualization of the learning situation and the ‘disturbance of routine’ are achieved (Davis et al., 1997). Undoubtedly, the wiki, as a platform of authentic and purposeful interaction, strongly supports socialization and students’ independence while boosting motivation (Arthur et al., 2006; Pempek et al., 2009; Warschauer, 1996; Wu & Hsu, 2011).

Authenticity comes, also, strongly into play and only few can question the ample authentic resources available online with just a click of a button. However, authenticity is not only restricted to resources, since students are provided with increasing opportunities for authentic interaction both synchronously (in real time) or asynchronously (delayed time) (Chapelle, 2000; Gonzalez & Louis, 2008). The provision of an immediate natural audience and an authentic communication purpose elevates communicative, social and thinking skills. Socialization, sharing and identification have proved to be among the most important attributes of CMC. Following the co-operative model put forward by Jones (2000), CMC tools, and the wiki among them, allows the creation and participation in new discourse communities, beyond the physical classroom (Vlachos & Athanasiadis, 2005). Consequently, a spirit of creativity and collaboration is cultivated through the engagement of learners in situated learning3, as they collaborate towards the creation, support and justification of arguments and genuine products (Debski et al., 1997 in Vlachos 2006a&b; Fustenberg, 1997). Additionally, thought exchange and meaning negotiation promote metacognitive and metalinguistic awareness (Sengupta, 2001), social and higher-order thinking skills (Skourtou & Kourtis-Kazouillis, 2002), peer interaction and feedback, reciprocity and ultimately autonomy (Kotter, 2003).

Following social-constructivist pedagogy, another crucial purported benefit of web 2.0 tools and the wiki in particular is that students’ individual learning styles and varied cognitive needs are being respected and catered for (Gonzalez &Louis, 2008; Vlachos, 2010). Within a student-friendly and anxiety-free atmosphere, learners develop their own personal styles and intelligences and ultimately develop the necessary skills and strategies which pave the way to their autonomy and lifelong learning (Beatty & Numan, 2004; Vlachos, 2005; Warschauer, 2001 & 2005; Williams, 2002).

Furthermore, it is commonly acknowledged that language learning does not occur in a vacuum nor is it only a linguistic system of signs and symbols to be mastered but it is a complex social practice (Norton & Toohey, 2002). When language learners interact via the computer they are seeking for more than words and phrases; instead they are trying to make themselves understood and be recognized by their interlocutors (Ghazvini & Khajehpour, 2011). Social networking tools can be ideal places for EFL learners to access, use and acquire the target language while refining their communicative competence4 (Reihardt & Zander, 2011; Yu et al., 2010). Communicative competence involves appropriate language use given the social context; the focus is on language not as an end in itself but rather as a means to function as social beings (Alptekin, 2002; Baker, 2012; Karavas and Manolopoulos-Sergi, 2004).
A timely issue in FL pedagogy is that of intercultural awareness. L2 communication should be perceived as a cross-cultural process and learners should become aware of the culturally-informed nature of communication (Risager, 2007). Recently, sociocultural knowledge (Hymes, 1972) has given way to critical Cultural Awareness and Intercultural Communicative Competence5 (Byram, 1999; Guth & Helm, 2012; Vlachos & Papaefthymiou, 2008). CMC platforms and the wiki in particular can function ideally as collaborative platforms among partner classes from different parts of the world with the aim of fostering cultural awareness, mediation skills and ultimately intercultural communicative competence. Linguistically and culturally diverse students can explore life in other social contexts, mediate across cultures, engage in ‘self’ and ‘other’ exploration, and ultimately understand and appreciate ‘otherness’ (Mountford & Wadham-Smith, 2000; Shetzer & Warschauer, 2000; Vlachos & Papaefthymiou, 2008). Here lies a dual gain: on the one hand, language learning and consolidation are naturally achieved, while, on the other, students acquire intercultural awareness and subconsciously develop their intercultural communicative competence, considered an important asset of a 21st century citizen (Baker, 2012; Chapelle, 2000; Cummins, 2000; Shetzer & Warschauer, 2000; Vlachos & Athanasiadis, 2005).

To summarise, web 2.0 technologies inherently bear affordances that open new, much-promising prospects for FLE potentially yielding rewarding outcomes. However, their employment per se does not guarantee their purported benefits; instead their successful integration is a key parameter.

3. Motivation, learner autonomy, and intercultural communicative competence in the 21st century

Developments in networked communication and multimedia create a potentially more central role for the computer as a tool for authentic language exploration and communication. However, its employment and integration should be in accordance with basic tenets of foreign language learning pedagogy, namely motivation, learner autonomy and intercultural communicative competence.

3.1 Motivation in the 21st Century

Viewing motivation in the 21st century, Dornyei (2005) offered a complex understanding of motivation in which foreign language learners envision an idealised English-speaking self-functioning in a cosmopolitan international society. Maybe the key to imagining this international society lies in acceding that the future of our students’ interaction would be in English with people who are native speakers of many other languages (Kormos & Csizer, 2008; Lamb, 2004; Su, 2006; Wu et al., 2011; Yashima et al., 2004).

The motivating aspects of employing CMC in the language learning process are widely touted primarily on the grounds that it involves direct human-to-human communication rather than human-to-machine (Barson et al., 1993; Cummins & Sayers, 1990; Paramskas, 1993; Sayers, 1993; Warschauer et al., 1994). The wide range of software available with all their interactive and multimedia capabilities have been shown to increase learner motivation rendering them into attractive learning tools (Chun & Brandl, 1992; Meloni et al., 2001; Singhal, 1997).
3.2 Fostering learner autonomy through Web 2.0 tools

Over the last decades, the concept of learner autonomy has gained momentum, becoming a ‘buzz-word’ within the context of language teaching (Little, 1991, p.2). In the 21st century, the maintenance of the ‘traditional classroom’, where teachers are the purveyors of knowledge and the wielders of power, and learners are seen as ‘containers’ to be filled with knowledge’ seems futile and outdated (Benson & Voller, 1997, p.20), thus a concatenation of changes has been triggered towards a more learner-centred kind of learning (Benson, 2001; Gonzalez & Luis, 2008; Little, 1991).

Embarking, however, on the premise that learner autonomy is not an article of faith nor a static ready-made product reached once and for all but a perennial dynamic process, it goes without saying that certain conditions should be obtained: learners’ engagement in critical inquiry, the development of skills and cognitive and metacognitive strategies, motivation, attitudes and metalanguage (i.e. knowledge about language learning) (Ellis & Sinclair, 1989; Papaefthymiou-Lytra, 2004). The role of the teacher in the learners’ process of attaining autonomy is crucial; teachers are the ones to ‘shoulder’ the responsibility of giving students a ‘helping hand’ to show the way (Sheerin, 1997; Thanasoulas, 2000). Coming to learning with technology, the picture that might come into mind is that of a student working in isolation. However, nothing could be much further from the truth. Paradoxically, as Gonzalez & Louis (2008, p.28) contend -through a very strong poetic metaphor of the ‘Learner technology worm’- that ‘autonomy and technology suggest communication and union and not separation and isolation’. CALL has strongly related to learner autonomy since its inception (Warschauer & Healey, 1998). Recently, though, multimedia and social networks allow for control over the ‘what’ and the ‘how’ of learning (Beatty & Numan, 2004; Vlachos, 2005 & 2010; Warschauer, 2001& 2005; Williams, 2002).

3.3 Teaching Language and Culture: Web 2.0 tools promoting ICC

According to Risager (2006, p.1) ‘language and culture are inseparable, inextricably linked’. This acknowledgement bears strong implications for FLE. Still, cultures are not static, but dynamic systems constantly being reformulated and renegotiated at both societal and individual level (Abrams, 2002). Thus, the way we approach culture informs our teaching practices.

Broadly, two main approaches to culture can be identified, the ‘large-culture approach’ and the ‘small culture approach’. The former epitomizes the default notion of ‘culture’, based on generalisation and stereotyping, which refers to prescribed ethnic, national and international entities. In contrast, Small-culture approach, being purely ethnographic, attaches ‘culture’ to small social groupings or activities wherever there is cohesive behaviour, allowing for individual differentiation, and thus avoids culturist, ethnic, or national stereotyping (Holliday, 1994 & 1999). In the foreign language teaching context, the orientation towards the one or the other approach to culture resonates a ‘Culture-Specific’ or a ‘Culture-General’ approach to language teaching respectively (Fay, 2008).

Until recently the native speaker (NS) constituted the model to aspire to and the one against which learners’ linguistic performance was gauged (Alvarez, 2007; Coulmas, 1981; Davies, 1991 & 2003; Timmis, 2002). Recently, however, the supremacy of an abstract and ideal native-speaker model and the purported native-speaker competence as the benchmark of perfection have been severely criticized (Alptekin, 2002; Bennett, 1986; Conrick, 1999;
Kachru, 1992 & 1996; Kramer-Dahl, 2003; Phillipson & Skutnabb-Kangas, 1999). Consequently, new norm-reducing, culturally informed paradigms\(^5\) were put to the fore which prioritize plurilingualism and multiculturalism and thus successfully uphold English as an instrument for intercultural awareness and communication among people around the world (Crystal, 1997; Fay, 1999; Sifakis, 2001; Tomalin & Stemplefski, 1993). Resonating Edward Hall’s view that ‘culture is communication and communication is culture’ (Hall, 1990, p.186), culture is viewed as a small emergent phenomenon and a ‘third space’ in which intercultural communication occurs (Bhabha, 1994 & 1995). Similarly, communication is viewed as an intercultural process of facework in which the unique and complex ‘cultural baggage’ of the interactants is mediated (Cupach & Metts, 1994; Grundy, 2004; Porter and Samovar, 1994). An ethnorelative\(^6\) orientation in teaching language and culture is put forward where intercultural communication among non-native speakers of English is prioritised, the effectiveness of which is gauged on the basis of the participants ability to negotiate a mutually-acceptable communication given their differences (Corbett, 2003; Llurda, 2004; Mckay, 2002 & 2004; Sifakis, 2004). This brings us to the much discussed notion of Intercultural Communicative Competence, which according to O’Sullivan (1994) is an amalgam of knowledge, awareness, and skills.\(^8\)

Ideally, the foreign language classroom can serve as a ‘neutral’, non-threatening ‘intercultural third space’ of self-expression, self- and other-exploration and a means of raising learners’ Intercultural awareness and developing ICC (Mckay, 2002 & 2004; Sifakis, 2004 & 2009). Maybe the potential of Computer-Mediated Intercultural Communication (CMIC) lies in that language learning is placed within a more broadly-scoped learning experience (Kern et al, 2004). Within virtual discourse communities, students disclose their cultural identities, exchange information on cultures and lifestyles and consequently realise and accept culturally influenced differences and similarities between their mindset and that of others. In this way, pupils’ languages and cultures are legitimated and brought in the frontline. This allows for the flow of new cultural schemata, perceptions and experiences in the EFL classroom and thus resulting in a gradual shift from an ethnocentric outsider perception to an insider cultural understanding (Baker, 2000; Byram, 1989; Elsen and St. John, 2007; Gaitartzi, 2009; Joinson, 2001; Pulverness, 1999; Vlachos, 2005, 2007, 2008, 2009; Vlachos & Athanasiadis, 2005).

We shall end our journey of the exploration of culture and its related concepts by subscribing to Tsokalidou’s (2005) recognition that ‘linguistic and cultural pluralism is a unique asset, ‘a gift that costs no money but has great value’.

4. Putting theory into practice: an intercultural wiki project

For the purpose of the present study, an action research\(^9\) was conducted aspiring to reflecting on the information gathered in order to apply it to our teaching practices (Miller, 2007; Rust and Clark, n.d; Wallace, 1998). More specifically, a case study was conducted, during which detailed information using a variety of data collection procedures was collected over a limited period of time (Bell, 2005; Creswell, 1994, as cited in Smith and Davis, 2003; Creswell, 2003; Stake, 1995).

A mixed methods approach was employed, which involved collecting and analysing both quantitative and qualitative\(^10\) data, on the grounds that any single method would have had its own limitations. Thus, a multi-method approach, also known as ‘triangulation’ was opted for in order to ensure reliability and validity and ultimately reach trustworthy findings (Bell,

Towards data collection, quantitative data were gathered through the administration of two questionnaires before and after the wiki project, aiming at pre- and post-assessing attitudes and achievements. This data were tabulated and analyzed by means of the Statistical Package in Social Sciences (SPSS). The results were presented in charts and were analyzed for statistical correlation between various responses using the ‘Pearson Chi-Square test’ (Howell, 1997).

Concurrently, qualitative data were also gathered through a classroom observation checklist and individual semi-structured interviews. The classroom observation checklist was employed in order to monitor students’ skills and behaviours in their natural setting (Wray et al., 1998) with the ultimate aim of achieving a better understanding of participants and events (Bailey, 2001; Glesne, 2006; Mackey and Gass, 2005). The Individual semi-structured interviews were employed in order to elicit students’ personal opinions, attitudes, thoughts and feelings in a more relaxed and informal way. Interviews were opted for because they allow openness, spontaneity, self-expression and sensitivity to individual-subjective interpretation of events (Brown, 2001; McDonough and McDonough, 1997).

5. The Findings of the research

Hopefully, the findings of the research did prove rather encouraging confirming the beneficial impact of CMC on motivation, higher-order thinking, autonomy and ultimately ICC, thus reinforcing relevant literature in favour of its integration in the language learning process.

5.1 Motivation

The first question that this research aspired to answer pertained to the impact of CMC on students’ motivation. Based on the findings of the research it can be safely argued that motivation was enhanced yielding more positive attitudes towards language learning. Thanks to its game-like nature, learners were delighted in using computers in their language lessons for a variety of activities. Writing on the computer, also, affected students’ motivation level and attitude towards writing for the better compared to the traditional pen-and-paper mode. Moreover, as shown, the employment of the wiki, as a Social Networking Site (SNS), instilled the language classroom with immediacy and creativity. Students engaged in CMC appeared intrinsically motivated since they considered the internet as a modern, useful, and real life tool which they anyway use in their personal life and its employment, an enjoyable and breaking-through teaching method. They were, also, found to indulge their ability to be connected and interact with people worldwide at a touch of a button from anywhere at any time (Moras, 2000; Pennington, 2004; Vlachos, 2010). Additionally, a real-life essence within an enjoyable, anxiety-free atmosphere blew in the classroom which made learners more receptive and learning more effective.

Furthermore, authenticity, real communication, and community were found to be among the motivational attributes of NBLT. Interaction and active communication on authentic and enjoyable scenarios and topics, building upon students’ interests and recreational activities, gave a strong boost to students’ confidence and motivation. The authenticity of the
endeavour of having a real audience to communicate and share ideas, thoughts, experiences, learn about each other lifestyles, and cultures encouraged learners’ desire to form part of the group and yielded intrinsic motivation among learners (Kern & Warschauer, 2004; Skinner & Austin, 1999; Vlachos & Papaefthymiou-Lytra, 2008).

Last but not least, the very fact that all students with no exceptions reported without hesitation their desire to participate in such CMC intercultural projects in the future was the most rewarding and promising finding.

5.2 Higher-order thinking skills and learner autonomy

The second and third research questions focused on whether CMC enhances learners’ higher-order thinking paving the way to their autonomy, while fostering the development of 21st century skills. The wiki, falling within current technological applications, proved to have the potential to transform traditionally passive and demotivated students into engaged and interactive learners who managed to equip themselves with knowledge, skills and strategies. Most importantly students felt, as they themselves disclosed, more confident and surer about themselves and capable of managing quite well on their own (hence the comment in one of the interviews: ‘Καλά δεν τα πήγαμε, κυρία, και μόνοι μας;’ ‘Didn’t we manage quite well on our own, miss?’). As a corollary, students felt more inspired to use their newly-acquired skills in global cross-cultural interactions, hence their remarkable enthusiasm about such future projects.

More specifically, the hyper-textual world and consequently reading online – due to the non-linear, multimedia and interactive presentation of information (Coiro, 2003) – was found to benefit students by enhancing higher-level reading skills and strategies (skim, scan, process, select, evaluate) as learners struggled to cope with the demands of sifting and processing information (Cobb and Stevens, 1996; Grabe, 1991). Though students were already familiar with computer and Internet facilities, still their research and critical skills became more elaborate and students were observed to have become more selective towards content. Active reading and critical literacy came strongly into play (Shetzer & Warschauer, 2000) since students were not passive consumers of content; instead they acted as active readers and co-constructors of meaning through reflection and decision making (Landow, 1992; Singhal, 1997). It goes without saying that higher order thinking skills, evaluative judgment and critical reasoning were promoted through learners’ attempt to grapple with the vast amount of online information (Facione, 1999; Mike, 1996; Wegerif, 2002).

Moreover, through the wiki, learners engaged in interaction, thought exchange, and meaning negotiation which promoted, as revealed, metacognitive and metalinguistic awareness (Sengupta, 2001), and social and collaboration skills (Skourtou & Kourtis-Kazoullis, 2002) within a positive and enjoyable ambiance which all together heralded the development of learner autonomy (Kotter, 2003). As students themselves disclosed, their being equipped with 21st-century skills had a strong bearing on their self-esteem; feeling more confident about their capabilities and their communication competency as L2 users. As observed, students gradually managed to emancipate from the teacher and set on their feet, thus subconsciously setting the touchstone towards self-directed, autonomous learning.
5.3 Intercultural communicative competence

The fourth research question aimed at detecting whether CMC among learners from diverse cultural backgrounds can foster intercultural awareness and intercultural communicative competence and ultimately contribute to the deconstruction of stereotypical attitudes and racism. Indeed the findings of the research have provided indisputable evidence towards this direction. More specifically, students, after the intervention of the project, appeared more interested in issues pertaining to culture and wholeheartedly eager to engage in cross cultural communication, since, according to their sayings, the intercultural wiki project was a positive and enjoyable experience.

Within the wiki virtual intercultural community, students came closer, disclosed their cultural identities, exchanged information on their cultures and lifestyle and in the process of co-constructing their intercultural space, realized and accepted culturally influenced differences and similarities between their mindset and that of others. This, as revealed, urged students to modify existing schemata and monocultural awareness and develop understanding and empathy towards 'other' (Byram, 1989). Interestingly, there was an undeniable shift in the opinion they held about each other after the project-especially that of Greek students about Germans; learners were observed to gradually question and deconstruct stereotypical knowledge, which led to cultural segregation and stigmatization and move gradually from an ethnocentric to an ethnorealative perspective (Hofstede, 1980; 1986; 1991/1994). Thus, it can be safely argued that students have developed both cultural and crosscultural awareness (Broady, 2004; Quappe and Cantatore, 2007; Tomlinson and Masuhara, 2004; Tseng, 2002) and have unconsciously developed, through their engagement in intercultural communication, a combination of knowledge and skills that make up intercultural communicative competence (Davcheva et al, 1999; Lambert, 1999; Seelye, 1993; Vlachos, 2005).

To put it in a nutshell, the foreign language classroom enriched by intercultural-communication web 2.0 tools has undoubtedly been found to serve as a ‘neutral’, non-threatening ‘intercultural third space’ of self-expression, self- and other-exploration and a means of raising learners’ intercultural awareness and developing intercultural communicative competence, while drawing innovative connections among languages and cultures (Lytra, 2007; Mckay, 2002 & 2004; Moje et al, 2004; Sifakis, 2004 & 2009; Vlachos 2008 & 2009).

5.4 Limitations of the research

Being a small scale research, entailing a relatively small number of participants, reservations should be held concerning the generalizability and applicability of the findings to the whole population of Senior High education. Secondly, the short-time duration of the research, coupled by sessions being lost, led to some lagging behind with the time schedule and the consequent collection of limited and fragmentary data. Last but not least, maybe certain reservation should be held concerning the nature of the instruments employed. The reliability of the interviews’ findings may be weakened by the fact that students may have not shared all their thoughts and bottled-up feelings with the researcher being their teacher as well.
5.5 Suggestions for further research

Bearing in mind the aforementioned limitations of the particular research, the need for a larger scale and a longer time-span research is undisputed. Given the fact that students were thrilled by the employment and the immediacy of Web 2.0 tools, intercultural cross-curricular projects, combining students’ interests, background knowledge and various scientific areas, would also be recommended which would undoubtedly open up new educational perspectives within a 21st century school.

Furthermore, heading for the normalization (Bax, 2003) of new technologies in language learning, wikis and blogs can serve as communication platforms among students and teachers allowing for teacher and peer scaffolding drawing internal and external connections both within and out of school teaching hours. Undoubtedly, Web 2.0 technologies herald a new era in foreign language learning. Learners’ language, social, cognitive, metacognitive, communicative, pragmatic, and intercultural skills can be brilliantly fostered through the employment of new technologies provided that they are carefully planned and successfully integrated in the teaching and learning process.

6. Conclusion

Teachers of English and innovative educators are in a constant search of ways to harness technology so as to leave the outdated lecture-memorisation teaching paradigm behind in order to enrich classroom practices and maximise students’ motivation, confidence and performance. The ‘exposure culture’ (Wu, 2005, cited in Anderson, 2006, p.74) and the immediacy of communication are among the hallmarks of the 21st century society. Given the plurilingualism and multiculturalism of contemporary societies, the present dissertation shed light on the integration of CMC in the senior high school educational setting aspiring to build bridges between students’ recreational literacy practices and in-school life with the aim of drawing new connections among languages and cultures.

Useful insights were also offered on the contribution of web 2.0 tools to students’ natural acquisition of new literacies, critical thinking and 21st-century skills, necessary constructs of their gradually-built autonomy edifice. Resonating, once again, Edward Hall’s eloquent remark that ‘culture is communication and communication is culture’ (1990, p.186), special allusion was made to the development of students’ social and communication skills and inasmuch as most of the encounters, nowadays, involve participants from varied linguistic and cultural backgrounds, communication should be viewed as a complex intercultural process of facework (Cupach & Metts, 1994; Grundy, 2004; Porter and Samovar, 1994). Towards this end, this dissertation aspires to sensitize EFL teachers towards envisaging the foreign language classroom as a ‘neutral’, non-threatening ‘intercultural third space’ to raise students’ intercultural sensitivity, awareness and competence in communication.

To put it in a nutshell, the particular dissertation attempted an amalgam of the educational, technological, social and cultural milieu to further lend support to the potential of new technologies to reshape both the content and the processes of language learning. It is fervently believed that their judicious and informed employment allows for a thorough integration of language, content and culture and provides students with unprecedented opportunities for autonomous learning.
Concluding, we shall quote Warschauer and Meskill’s witty remark (2000, p.15) that ‘the key to successful use of technology in language teaching lies not in hardware or software but in “humanware”’. The two profound scholars conclude on the topic by commenting:

‘...Language learning is an act of creativity, imagination, exploration, expression, construction, and profound social and cultural collaboration. If we use computers to fully humanize and enhance this act rather than to try to automate it, we can help bring out the best that human and machine have to offer...’

Notes

1. The notion of “students as audience” points to a traditional teacher-centered approach to learning characterized by instructor-expert generated learning which casts students as passive consumers of information and knowledge (Dalsgaard, 2006; Downes, 2005 & 2007).
2. “Foundational literacies” include phonemic awareness, knowledge of grammar and syntax, word recognition and vocabulary knowledge, decoding knowledge, comprehension, inferential reasoning, the writing process, responding to literature etc.
3. In situated learning learners engage in meaningful tasks and work towards the solution of meaningful problems that are within the scope of their interests and can be applied in multiple real life contexts.
4. Communicative competence is a complex construct which comprises a number of competences (linguistic, pragmatic, strategic, sociolinguistic and intercultural), skills and knowledge that learners gradually built through the various linguistic, social and intercultural experiences they gain through the course of their life (Vlachos, 2010).
5. Intercultural Communicative Competence (ICC) can be defined as the knowledge, skills and strategies that allow learners to communicate effectively with people from other cultures different than their own using the target language.
6. Culturally-informed paradigms view the English language as an international language or as the international lingua franca serving primarily communicative purposes with an emphasis on intercultural interaction and communication (Prodromou, 2000; Sifakis, 2003). A culture-general orientation is put forward with the ultimate aim of enabling learners to acquire generic cultural awareness to make sense of the cultural attire of the interlocutors in potential English-medium interactions, thus develop multicultural communicative competence (Cotterall, 2000; Medgyes, 1994). These interactions are considered more likely to involve non-native-speakers (NNSs) of English without, in any case, excluding native speakers (NSs).
7. Ethnorelativism, as opposed to ethnocentrism, is the interculturally-desired state of mind in which no one way of understanding the world is seen as being inherently better, more natural, or more normal than any other worldview.
8. O’ Sullivan views Intercultural Communicative Competence as consisting of knowledge, awareness, and skills; that is, knowledge on the host language and culture including norms of social and interpersonal conduct, an emotional and motivational capacity to deal with otherness, and finally a set of skills/strategies in order to identify and compensate for possible miscommunications (Byram, 1999; Kim, 1994; Singerman, 1996). He identifies three broad aims of intercultural communication: avoid miscommunication which is due to cultural factors, recognize when
miscommunication could be due to cultural factors, and lastly repair miscommunication. Towards this direction, he identifies seven set of skills, namely, externalization skills, analytical, monitoring, communication skills, anxiety management, tactical, and investigative. (For more details see O'Sullivan, 1994, p. 97-137).

9. According to Reason & Bradbury (2001, p.1) action research is ‘a participatory, democratic process concerned with practical knowing...it seeks to bring together action and reflection, theory and practice,...in the pursuit of solutions to issues of pressing concern to people’.

10. Quantitative research adopts a postpositivist perspective towards developing knowledge and it is considered controlled, objective and reliable based on predetermined instruments that yield statistical data. On the other hand, qualitative research adopts a constructivist perspective towards knowledge and it is considered naturalistic, uncontrolled, subjective and valid, during which the researcher collects open-ended, emerging data with the intent of developing themes from the data gathered (Creswell, 2003; Nunan, 1992).

11. For purposes of the article’s brevity, the data collection instruments of the research are not appended. For those interested, these can be found in the author’s Med dissertation, hosted in the library of the Hellenic Open University.

12. The findings of the research are analytically presented and correlated in the author’s MEd dissertation, hosted in the library of the Hellenic Open University.

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Social networking and language learning with Twitter

Norman FEWELL

As educators are beginning to grasp the realization that the boundaries and limitations of the physical world may now be remedied by the availability of unlimited communicative opportunities in the virtual world, online communication tools have become increasingly utilized to supplement language learning. The latest trend among a popular array of Web 2.0 technologies is microblogging. This refers to communicative tools that allow users to stay in contact with friends in a social network by texting short messages, often two or three sentences. Communicating with shorter direct messages saves time in reading and writing. As a result, microblogs have grown significantly in popularity, appealing to users as practical alternatives to the hassles of reading and writing lengthy complex messages often found in traditional online mediums. The flexibility of microblogging is another attractive feature, allowing users access to its platform via instant messaging, email, cellphone, or directly through a web browser. The rising trend of microblogging presents educators with an opportune chance to harness its popularity as a communicative tool for students to increase L2 utilization outside the classroom. This article examines the use of the microblogging in a project aimed at promoting L2 communication for EFL learners outside the classroom.

Δεδομένου ότι οι εκπαιδευτικοί έχουν αρχίσει να κατανοούν ότι τα όρια και οι περιορισμοί του φυσικού κόσμου μπορούν τώρα να ξεπεραστούν με τη διάθεση νέων επικοινωνιακών ευκαιριών στον εικονικό κόσμο, η απευθείας σύνδεση και τα σύγχρονα εργαλεία επικοινωνίας
χρησιμοποιούνται όλο και περισσότερο για να συμπληρώσουν την εκμάθηση γλωσσών. Η τελευταία τάση ανάμεσα σε μια δημοφιλή σειρά από τεχνολογίες του Web 2.0 αφορά το microblogging. Αυτό αναφέρεται σε επικοινωνιακά εργαλεία που επιτρέπουν στους χρήστες να μένουν σε επαφή με φίλους και γνωστούς σε ένα κοινωνικό δίκτυο με την αποστολή σύντομων γραμμών μηνυμάτων που συχνά περιλαμβάνουν δύο ή τρεις προτάσεις. Η επικοινωνία με μικρά αλλά άμεσα μηνύματα εξουδετερώνει το χρόνο στην ανάγνωση και τη γραφή. Ως αποτέλεσμα, τα microblogs έχουν αυξηθεί σημαντικά σε δημοφιλή σειρά από τεχνολογίες το Web 2.0. Αυτό αναφέρεται σε επικοινωνιακά εργαλεία που επιτρέπουν στους χρήστες να μένουν σε επαφή με φίλους και γνωστούς σε ένα κοινωνικό δίκτυο με την αποστολή σύντομων γραμμών μηνυμάτων που συχνά περιλαμβάνουν δύο ή τρεις προτάσεις. Η επικοινωνία με μικρά αλλά άμεσα μηνύματα εξουδετερώνει το χρόνο στην ανάγνωση και τη γραφή. Ως αποτέλεσμα, τα microblogs έχουν αυξηθεί σημαντικά σε δημοφιλή σειρά από τεχνολογίες το Web 2.0. Αυτό αναφέρεται σε επικοινωνιακά εργαλεία που επιτρέπουν στους χρήστες να μένουν σε επαφή με φίλους και γνωστούς σε ένα κοινωνικό δίκτυο με την αποστολή σύντομων γραμμών μηνυμάτων που συχνά περιλαμβάνουν δύο ή τρεις προτάσεις. Η επικοινωνία με μικρά αλλά άμεσα μηνύματα εξουδετερώνει το χρόνο στην ανάγνωση και τη γραφή. Ως αποτέλεσμα, τα microblogs έχουν αυξηθεί σημαντικά σε δημοφιλή σειρά από τεχνολογίες το Web 2.0. Αυτό αναφέρεται σε επικοινωνιακά εργαλεία που επιτρέπουν στους χρήστες να μένουν σε επαφή με φίλους και γνωστούς σε ένα κοινωνικό δίκτυο με την αποστολή σύντομων γραμμών μηνυμάτων που συχνά περιλαμβάνουν δύο ή τρεις προτάσεις. Η επικοινωνία με μικρά αλλά άμεσα μηνύματα εξουδετερώνει το χρόνο στην ανάγνωση και τη γραφή. Ως αποτέλεσμα, τα microblogs έχουν αυξηθεί σημαντικά σε δημοφιλή σειρά από τεχνολογίες το Web 2.0. Αυτό αναφέρεται σε επικοινωνιακά εργαλεία που επιτρέπουν στους χρήστες να μένουν σε επαφή με φίλους και γνωστούς σε ένα κοινωνικό δίκτυο με την αποστολή σύντομων γραμμών μηνυμάτων που συχνά περιλαμβάνουν δύο ή τρεις προτάσεις. Η επικοινωνία με μικρά αλλά άμεσα μηνύματα εξουδετερώνει το χρόνο στην ανάγνωση και τη γραφή. 

1. Introduction

Among a number of obstacles in language learning, EFL environments have the distinct disadvantage of fewer available opportunities for learners to use English as a communicative tool outside the classroom. As online communicative platforms have ended the limitations of the physical world by offering unlimited communicative opportunities in the virtual world, Web 2.0 technologies have become increasingly utilized to supplement language learning. Numerous language educators have successfully integrated online communicative tools into their repertoire (Garrett, 2009; Levy, 2009; Meskill & Anthony, 2010). The transformation in the availability of language learning opportunities continues to be positively influenced by ongoing innovations in internet technologies. The microblog is one tool that may offer students many potential benefits.
The spread of online educational instruction has been phenomenal in the past two decades. In recent years, the increase of online technologies offering user-friendly interfaces has led to the growth of an Internet offering more accessibility to the general public. Online communicative technologies have rapidly evolved with the creation of interactive platforms that have guided the habitually passive read-only mode of internet users in the first generation of Web 1.0 to that of active participates in the Web 2.0 environment. Widely available Web 2.0 technologies consist of easily accessible tools that encourage the sharing of information (Lomicka & Lord, 2009). As a result of these developments, the role of the Internet has expanded in numerous ways, most noticeably in the growth of online social networking. These user-friendly networks encourage the creation of online communities through creativity, sharing, and social interaction. The Web 2.0 generation has access to a wide range of multidimensional communicative tools that can provide language learners with immense flexibility. The potential benefits of utilizing these tools in language education have been recognized early in the development of the Internet (e.g., Bump, 1990; Kelm, 1992; Soh & Soon, 1991). In an effort to find additional communicative opportunities for language learners, educators have increasingly utilized various online tools including email, chat, message boards, and blogs (Levy, 2009). The availability of these tools has provided language learners with a means to actively participate through numerous channels of communication. Among these Web 2.0 tools, microblogging has been gaining immense popularity as a social networking platform due to its simplicity along with the increasing reliance on mobile phones for users to access the Internet (Holotescu & Grosseck, 2011). Microbloggers can read and write messages with little effort. The practicability of microblogging that has attracted internet users can equally appeal to the needs of language learners. Text limitations of 140 letters, approximately two or three sentences, are ideally suited for L2 learners to easily manage reading and writing tasks (Luo & Gao, 2012). Microblogging has created new communicative opportunities for language learners and this article shall explore findings of a class trial experiment using Twitter as a social networking platform for promoting communication in the target language.

1.1 Advantages of Microblogging

Among an array of online communicative tools, the potential adaptation of microblogging for language learning has only recently emerged as a topic of discussion (Gao, Luo & Zhang, 2012). Microblogging provides language learners with the availability of participating in an online social community that can be accessed via cellphones. The Web 2.0 generation is not merely equipped with a traditional fixed internet connection; rather, many of them have become more dependent on mobile connections to access the Internet (Holotescu & Grosseck, 2011).
As a result of these changes, mobile suited microblogging platforms have become a more appealing option. Mobile web users can stay connected with friends by sending and receiving short updates from one another. Moreover, text communication allows users to continue conversation without openly interrupting others in their immediate surroundings. In addition, microblogging platforms provide users with the option of communicating individually or with an entire community. In essence, the microblogger has the option of posting messages that may be read either publically, within the community itself, or privately to selected individuals.

Although traditional blogs may sound generally similar in description, there are some notable differences. In comparison to blogs, microblogs are based on a framework that essentially promotes more interactive communication. Typical blogs encompass a lengthy passage written by the blog’s author that may often be followed by brief comments made by readers. Blogs are characteristically composed of a heavy top-down communicative structure with less prominence given to the replies from readers. In contrast, microblogs provide equality in format for all participants. A communicative balance is encouraged in microblogging with limits set on the length of all messages, ensuring equality among all participants. Accessibility to an online platform that promotes a form of democratic equality within these communities may provide language learners with a more suitable environment for interactive communication.

1.2 The Microblogging Assignment

The assignment required students to participate in an online Twitter community with other classmates, writing a minimum of three messages per day for a period of two months. In an attempt to promote a more socially appealing communicative atmosphere, students were given the freedom to choose their own topics. In essence, there were no restrictions, with the exception of using English as the sole communicative medium. Students were asked to continually monitor and reply to the messages of their classmates. The participation levels were easily accessible by viewing daily postings. The students had to be periodically reminded about the importance of the assignment, as the number of posts and quality of messages were being evaluated by the instructor. At the beginning of the semester, it was necessary to repeatedly remind students to maintain diligence in following the requirements of the assignment. Soon afterwards, the majority of students seemed more comfortable using Twitter and integrated the platform into a daily set routine of reading and writing messages. Many of the students were soon actively posting messages, well beyond the minimum requirements of the assignment.
2. Methodology

2.1 Materials and Participants

In an attempt to evaluate the potential benefits of integrating such Web 2.0 technologies in a language learning environment, the microblogging platform Twitter was utilized as a communicative tool for an out-of-class assignment. Following completion of the assignment, requiring daily online participation in a microblog for a period of two months, a questionnaire was administered in an attempt to gather insight from students on the effectiveness of microblogging as a means of promoting communication, learning, motivation, and social cohesion. A questionnaire was administered to the participants following completion of the two-month microblogging assignment. The questionnaire attempted to gather insight from students about the online social networking platform Twitter and its effectiveness as a tool in promoting English language learning. A modified questionnaire, based in part on a survey conducted by Antenos-Conforti (2009), was utilized in this study (see Appendix). Modifications of the survey included limiting the open-ended questions and Likert scale statements to areas relating to communication, learning, motivation, and social cohesion. Regarding the Likert format used in the questionnaire, statements were set at a five-point scale ranging from ‘strongly disagree’ to ‘strongly agree.’

A total of 37 students, enrolled in EFL classes at a university in Japan, participated in the study. The participants were undergraduate students in language and education related majors. All of the participants were native speakers of Japanese with English proficiency abilities ranging from upper-intermediate to advance.

2.2 Purpose of the Study

The primary questions were as follows:

- What aspects of language learning do students believe microblogging may improve?
- As a ‘social networking’ tool, how effective was microblogging in helping form a sense of community?

3. Results and discussion

One of the initial questions in the survey inquired about individual social networking use prior to enrollment in the course. Surprisingly, all of the students indicated an active involvement in
participating in online social networking. Approximately 87% of the respondents utilized Facebook, the most commonly used social networking platform among the students. Twitter was a distant second in popularity with half of the number of users as Facebook (46%). The third and fourth most common social networking platforms used by nearly a quarter of the respondents were Google Groups (24%), followed by the Japanese social networking site Mixi (22%). Despite variability in individual preferences, the prevalent use of social networking among all of the participants is a positive indication that a microblogging class assignment would likely be less technically problematic for them to undertake. In an inquiry comparing student perceptions of Twitter after initially trying it, and then after completion of the two-month microblogging assignment, a significant shift in response becomes apparent. Initially, approximately 23% of the participants indicated a favorable position of Twitter after first using it. An inquiry into the students’ latest outlook of the microblogging platform revealed an increase of positive responses to 53%.

Regarding microblogging features that best suited the language learning needs of students, an overwhelming majority (74%) stated that "sharing information" was valued the most. The second most predominant feature favored by students was "being able to reply to others," (62%) followed by the "ability to use the target language outside of class" (48%). An open-ended question, asking about which aspects of Twitter were considered the most valuable overall, yielded a variety of responses. The majority of these were associated with the ease that microblogging provided in facilitating communicative opportunities with classmates. Moreover, many of the students described Twitter as a general communicative tool that helped create a fun social atmosphere for using English. In addition, the use of peer learning was mentioned in several instances. Students would often seek advice and ask questions concerning language study from their peers.

In the section of the questionnaire composed of Likert scale statements, the first area focused exclusively on the matter of language learning and microblogging. In this section, the majority of participants indicated positive responses for each of the twenty-two Likert statements with only a small fraction signifying negative responses. Moreover, significant positive distinctions were notable in nearly half of the responses to the Likert statements. In an inquiry into general perceptions of utilizing Twitter to enhance learning experiences in class, 65% of the students felt that it made the course more interesting. An overwhelmingly majority of students, 74%, agreed that microblogging helped them learn more about English in this class than in a regular English class. Approximately 44% of the students were in agreement that the microblogging assignment required them to put more time into this class in comparison to other English
classes. Regarding motivation, the use of Twitter seemed to have a positive impact for many of the students with 57% of them agreeing that microblogging helped increase their motivation to learn English. Interestingly, the Twitter assignment may have also improved some aspects related to writing for the students. Nearly 52% of them felt that their writing skills had improved as a result of the assignment, and an overwhelming majority, 84%, stated that they enjoyed microblogging more than traditional writing assignments. Regarding aspects of learning on Twitter, 52% of the students felt that they learned a lot from the replies they received, while 66% felt that they learned a lot from replying to others, and 54% felt that they learned a lot from reading messages posted by others. Finally, in an inquiry into the relevancy of microblogging to the real-life language use of English, 83% of the students felt that using Twitter was a productive tool to accomplish this goal.

The next section of Likert scale statements in the questionnaire focused on the area of social cohesion, potentially occurring with the integration of the social networking assignment. In this section of the questionnaire, examining social aspects related to the building of an online community, a total of nine statements were presented. A comparable proportion of positive responses were found in this section of the questionnaire as well. The majority of participants indicated positive responses for each of the nine Likert statements with only a small fraction signifying negative responses. Significant positive distinctions were notable in most responses to the Likert statements, specifically seven in total. In an inquiry about the urge to read messages from others, 52% of the students stated that they looked forward to reading everyone else’s postings. In a statement concerning the notion of sharing information about our lives, a substantial number of students responded with a positive stance at 84%. In regard to rereading past messages and replies from others, 56% felt that rereading messages was pleasing, while 62% expressed enjoyment in rereading past replies. In a statement addressing aspects of familiarity with others in the microblog community and the development of an increased comfort zone in communicating with them, 69% of the respondents indicated agreement. In a statement that may have revealed a motivational inclination regarding the assignment, a significantly high percentage of the participants, 82%, indicated that they wished that other students in the English class would have tweeted more often.

In the two areas explored in the questionnaire, language learning and the building of an online social community, the majority of the participants responded positively to statements inquiring about the feasibility of microblogging as an educational and social networking tool. Since most of the participants were already comfortable using multiple online social networking tools, and nearly half of them specifically mentioned using Twitter previously, the
adaptation of this microblogging platform for language learning posed no serious obstacle. Although this social networking tool was initially used by many of the students to communicate in their native language, the only real challenge for the instructor was to coordinate a simultaneous shift to the target language. Since the students were highly motivated to learn and use English, and all of them were already familiar with social networking, a comfortable transition to microblogging predictably ensued. Incorporating an online social networking assignment in the course has heightened student expectations on learning and utilizing English, along with helping to create a closer bond among classmates.

4. Conclusion

In the search for expanding opportunities to communicate in the target language, online social networking tools may offer language learners a practical means to communicate in authentic real-time situations. Once considered the most prevalent obstacle of studying in an EFL environment, the limitation in opportunities to communicate beyond the classroom in the physical world may now be remedied with an array of online communicative tools in the virtual world. Microblogging tools, such as Twitter, have recently gained popularity due to an increasing reliance on mobile phones to access the Internet. Microblogging encourages users to stay in touch with short direct messages, due in part to limitations in text count. Restricted to two or three sentences, messages are more manageable for learners to read and write. Moreover, the limitation on message length ensures an equal communicative balance for all participants. Offering both ease and convenience in conventional use, integrating a microblogging class assignment would mainly entail coordinating a simultaneous shift to the target language.

The students easily adapted to the microblogging tool to communicate in English and to create a stronger community bond through online social networking. In a questionnaire that attempted to gather insight into the effectiveness of the assignment, an overwhelming majority of students responded positively to the use of microblogging as a means of promoting language learning and social cohesion. Although this study was limited to a small group of participants, the findings revealed that current technological and social networking trends should encourage educators to adopt microblogging as a viable tool with the potential of expanding opportunities to communicate in the target language.
References


Appendix

Questionnaire: Using Twitter in English Class

1. Before taking this course, which of the following social networking websites did you use? Please circle:

   Facebook    Second Life    Mixi
   YouTube     Yahoo group    blogs
   Twitter     Google group   other (please list)

2. What was your first impression in using Twitter?

3. After using Twitter throughout the course, what is your impression now?

4. Please indicate which of the following features of Twitter that you found useful in learning English. Please circle.

   having delayed communication
   having instantaneous communication
   replying to someone’s tweet
   sharing information
   following native-English speakers
   building community with classmates in your class
   having a 140 character limit
   using language with classmates outside of class
Learning English language and culture

In this section, please respond whether you agree or disagree with the statements about learning English. Please choose the response that best matches your opinion.

Strongly disagree (SD) Disagree (D) Neutral (N) Agree (A) Strongly agree (SA)

1. The learning experiences on Twitter made this a more interesting course for me.
2. The tweets contributed greatly to my knowledge of English grammar and vocabulary.
3. I learned more about English culture in this class than I would have in a regular English class.
4. Because of using Twitter, I put more time into this class than in a regular English class.
5. Posting tweets helped build my confidence in writing English.
6. Twitter helped reduce my anxiety in learning English.
7. Twitter increased my motivation in learning the language.
8. I was able to infer meaning from tweets according to the context/conversations.
9. I gained more confidence in my abilities as an independent learner.
10. My reading skills in English have improved because of Twitter.
11. My writing skills in English improved because of Twitter.
12. I learned a lot from the replies to my tweets.
13. I learned a lot from replying to other people’s tweets.
14. I learned a lot from reading other people’s tweets.
15. Having the professor reply to tweets increased learning potential.
16. Having the professor tweet and reply to tweets increased my motivation.
17. I enjoyed tweeting more than traditional writing assignments.
18. I felt the 140-character tweet length was too limiting.
19. Reading tweets with language mistakes in them doesn’t help me learn.
20. I wish my classmates would have tweeted more often.
21. The information I read from tweets contributed to my knowledge about English culture.
22. Twitter helped me better understand communicative interaction in English.

Social aspects of Twitter

In this next section, please respond whether you agree or disagree with the statements about social networking aspects of Twitter. Please choose the response that best matches your opinion.

Strongly disagree (SD) Disagree (D) Neutral (N) Agree (A) Strongly agree (SA)

1. I looked forward to reading tweets.
2. I found myself wanting to post tweets.
3. I enjoyed sharing information about our lives.
4. Information I read from other tweets helped contribute to a greater sense of class community.
5. Knowing the people I am following made me feel more comfortable tweeting in English.
6. I enjoyed rereading past tweets of others.
7. I enjoyed rereading past replies of others.
8. I enjoyed rereading past conversations of others.
9. I was able to more easily make friends in class using Twitter.
Personal opinion about your experience

a) What did you like most about using Twitter? Explain.
b) What did you like least about using Twitter? Explain.
c) Will you use Twitter for learning English in the future?
d) Will you use Twitter for your own personal use?
e) Do you believe Twitter helped our class and students to focus on community(social) building?
f) If you sent replies to others but did not receive responses to your own tweets, did that negatively shape your opinion of using Twitter to learn English? Explain.
g) Please provide any additional information that you would like to share.


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Using digital storytelling to develop foundational and new literacies

Χρησιμοποιώντας την ψηφιακή αφήγηση ιστοριών για την ανάπτυξη θεμελιωδών και νέων εγγραμματισμών

Sevasti PAPADOPOULOU & Kosmas VLACHOS

This paper presents a research conducted in a Greek Primary school and studies 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. The power of stories has been significant through the generations for thousands of years. Stories represent the oldest form of education and through them, learners are at the centre of the learning process and their experiences as well as their voices are valued (Reinders, 2011). Nowadays with the development of Information and Communication Technologies (ICTs), storytelling takes a new format through the use of different multimedia tools. By and large, through the use of myths, learners were involved in problem-solving and higher order thinking skills, critical and creative thinking and decision-making all of which meet the demand for 21st Century Skills.

Η εργασία αυτή παρουσιάζει μια έρευνα που έγινε σε ένα Ελληνικό δημοτικό σχολείο και μελετά τη χρήση της Ψηφιακής κατασκευής ιστοριών για να αναπτυχθούν στους μαθητές Θεμελιωδές και Νέο Εγγραμματισμοί καθώς και να βελτιωθεί η δεξιότητα παραγωγής γραπτού λόγου μέσα από την ενεργή συμμετοχή και την συνεργατικότητα των μαθητών. Ο στόχος των ερευνητών ήταν να προώθησαν στους μαθητές τη φιλοσοφία του ‘μαθαίνω να γράφω’, μια μαθητοκεντρική προσέγγιση στη διδασκαλία της παραγωγής γραπτού λόγου μέσα από την ανάπτυξη Θεμελιωδών Εγγραμματισμών καθώς και εκείνων του Πληροφοριακού και των Μέσων Επικοινωνίας (Μιντιακός Εγγραμματισμός). Η σημαντικότητα των ιστοριών είναι φανερή σε γενικές χαλάδων ετών. Οι ιστορίες αντιπροσωπεύουν την παλαιότερη μορφή εκπαίδευσης και μέσω αυτών, οι μαθητές βρίσκονται στο κέντρο της μαθησιακής διαδικασίας και οι εμπειρίες τους καθώς και οι φωνές τους παίρνουν αξία (Reinders, 2011). Σήμερα με την ανάπτυξη της Τεχνολογίας της Πληροφορίας και της Επικοινωνίας, η αφήγηση ιστοριών λαμβάνει μια καινούργια μορφή.
με τη χρήση διαφορετικών εργαλείων πολυμέσων. Γενικά, μέσα από τη χρήση μύθων, οι μαθητές ενεπλάκησαν σε δεξιότητες επίλυσης προβλημάτων και λήψης αποφάσεων, δεξιότητες υψηλής σκέψης, κριτική και δημιουργική σκέψη που αποτελούν μέρος των δεξιοτήτων του 21ου αιώνα.

Key words: Digital Storytelling, foundational literacies, new literacies, information literacy, media literacy, 21st century skills, write differently, learner engagement, collaboration

1. Introduction

Educational Technology is very important in our contemporary world because it provides both teachers and learners with the opportunity to make language learning flexible, motivating, effective and enjoyable. Nowadays young learners use technology to play games. Thus, it is of utmost importance that especially Primary school teachers should help them view technology as a tool in order to use it for educational purposes. This can be achieved through making, doing and creating with technology (Schaffhauser, 2011).

All teachers have memories of stories being read in kindergarten and primary school or of writing stories in class. Therefore, young learners have an innate love for stories. Besides, they help learners develop understanding, respect and appreciation of other civilisations. Digital storytelling embraces the traditional storytelling and reconfigures it by combining different types of multimedia; computer-based graphics, recorded audio, computer-generated text, video clips and music. Since literacy is not something static, learners should be prepared to comprehend and communicate through traditional practices as well as emerging technology. From an early age, literacy education should focus on production and ‘media making’ and not merely on reading and writing.

The researchers involved in the endeavor presented in this paper, having taken all the above into consideration, used Digital Storytelling in Primary Education. The research project lasted seven months, from October 2012 till April 2013 and took place in a State Primary school in Athens. Two different grades, the 5th and the 6th, consisting of two classes each, participated with 69 learners who fell roughly into A2 of the Basic level (Common European Framework classification), the so-called, “Waystage” (Council of Europe, 2011 as cited in Sifakis, 2004).

The theoretical framework is thoroughly described in section 2 whereas the design of the research in section 3. Then the findings of the study are presented and discussed in section 4. Finally, limitations of the study and recommendations for further research are outlined in sections 5 and 6 respectively.

2. The emergence of digital storytelling

Digital Storytelling has not been a new concept in multimedia technology, thanks to Lambert and Atchley. They were the co-founders of the Center for Digital Storytelling (CDS), a non-profit, community arts organization at U.C. Berkley in Berkeley, California in 1993 (Bull &
Kajder, 2004; Chung, 2007; Robin, 2008). Since the early 1990s people, involved in creating and sharing their narratives, have been helped and trained by their centre.

Digital Storytelling is the practice of using ICT tools, Internet downloaded or hand-drawn images, photographs, graphics, texts, recorded audio, music, sound effects not to mention the learners’ own voice in narrating to tell stories. Learners are considered creators and producers and not consumers since they pass through the traditional writing processes of brainstorming, selecting a topic, drafting, conducting research, writing a script and developing an engaging story (Robin, 2008, Educase Learning Initiative, 2007). Then they supplement them with multimedia tools. In the end, the digital stories can be played on a computer, uploaded on a web site, or burned on a DVD.

2.1 Types of Digital Stories and their elements

There are many different types of digital stories, the major ones being categorised into the following groups:

- personal narratives - stories that contain accounts of significant incidents in one’s life,
- historical documentaries – stories that examine dramatic events that help us understand the past, and
- stories designed to inform or instruct the viewer on a particular concept or practice (Davidson and Porter, 2005, Eisner et al, 2007, Robin, 2006 and Robin, 2008).

Besides, the Center for Digital Storytelling is known for developing the Seven Elements of Digital Storytelling. Lambert (2007) addresses the following digital story traits:

1) Point of View – the author’s perspective
2) A Dramatic Question – a question answered by the end of the story
3) Emotional Content – serious issues spoken in a personal and powerful way
4) The Gift of your Voice – how the story is told so that the audience can understand the context
5) The Power of the Soundtrack – music or sound effects to accompany the story
6) Economy – put as simply as possible so that the viewer is not overloaded with unnecessary information

Nevertheless, later, Houston University expanded and modified these traits into:

- the overall purpose of the story (instead of the Emotional Content),
- the choice of content,
- the quality of the Images and

This modified set of elements provides learners with a purpose and set of guidelines. Learners use them as they find, make or take pictures on their topic, prepare a storyboard consisting of their ideas, and complete an engaging digital story that manifests the understanding and point of view of the topic they have chosen (Robin and Pierson, 2005). However, a digital story may include many, if not all the elements.
2.2 Digital Storytelling as an effective Instructional tool

Digital Storytelling has become a powerful instructional tool for both learners and teachers. First of all, learners of different learning styles can be engaged in their own learning process and develop both multimedia and communication skills. Additionally, it is motivating as it provides learners with authentic material and promotes their creativity (Karaoğlou, 2009). Apart from these, the integration of visual images with the written text improves learners’ comprehension. Moreover, digital stories let learners “express themselves not only with their own words but also in their own voices, fostering a sense of individuality and of ‘owning’ their creations” (Educause Learning Initiative, 2007, p.12). Their impact on learners is also shown through the learners’ critical thinking of which combinations of audio and visual elements will be effective.

Apart from the above, Figure 1 overtly presents the convergence of Digital Storytelling in education. It is evident that when learners take part in designing, creating and presenting their digital stories, they are engaged in the following skills:

- Research skills: locating and analysing necessary information;
- Writing Skills: going through planning, revising and giving or receiving feedback when learners develop a script;
- Organization Skills: managing the materials they want to use and the time to complete it;
• Technology Skills: using different types of tools like digital cameras, scanners, microphones and multimedia authoring software;
• Presentation Skills: coming up with the best presentation of the story;
• Interview Skills: deciding on which questions to use in an interview;
• Interpersonal Skills: the members of a group have different roles;
• Problem-Solving Skills: discussing and deciding how to avoid possible problems they may face throughout their work; and
• Assessment Skills: by evaluating their own and others’ work and making suggestions for improvements (Robin, 2006).

2.3 The 21st century skills

Moreover, Robin (2008) asserts that learners can be benefited to a great extent when involved in creating their own digital stories since they are able to develop various types of literacy such as:
• Digital literacy — communicating with a community to discuss issues, gather information, and seek help;
• Global literacy — reading, interpreting, responding, and contextualizing messages globally;
• Computer or Technology literacy — using computers and other technology for the improvement of learning, productivity, and performance;
• Visual literacy — understanding, producing, and communicating through visual images;
• Information literacy — finding, evaluating, and synthesizing information (Robin, 2006, 2008:224) and
• Media literacy - recognizing, evaluating and applying “the persuasive techniques of media so that learners can tell their story and understand the true nature of the stories that others are telling them” (Ohler, 2008, p.12).

From the above we can deduce that Digital Storytelling provides learners with 21st Century Literacy, Digital Age Literacies, or 21st Century Skills (Brown, Bryan, & Brown, 2005; Jakes, 2006; Partnership for 21st Century Skills, 2004) as it is clearly presented in Figure 1 above. Thus, learners can become information seekers, interpreters, analyzers, organisers, synthesizers, assessors, higher-order thinkers, problem solvers, risk takers, effective communicators, collaborators and creators of knowledge (Porter, 2003, Tolisano, n.d.).

3. Developing literacy through digital storytelling

In continuation of literacy discussion, attention is drawn to both traditional and new literacy practices through Digital Storytelling. Traditionally, the literacy model is that of ‘one medium, one mode, and one language’ defined from a print-based world, a world of two dimensions: print and images. However, literacy definition has undergone a dramatic change brought by the rapid advancements in the world and especially the technological development. Therefore, nowadays there is a shift towards an ideological literacy model that sees literacy from a different perspective, not always appearing in a linear, from left-to-right format.
From the above we can deduce that in the 21st century, as far as literacy teaching and learning and, in particular, writing is concerned, learners should be equipped with not only Foundational but also New literacies in order to construct meaning. Concerning this research, the Foundational literacies of producing well-spelt, syntactically and grammatically correct texts and moving forwards and backwards in the stages of the writing process are mainly investigated. As for New literacies, this study focuses on Information and Media literacies.

### 3.1 Foundational literacies

Up to now, foundational literacies have been taught necessarily when reading or writing any type of text ‘print or paper’. According to Leu et al (2004, p. 15) “old literacies’ refer to ‘skill sets’ that include phonemic awareness, word-recognition, decoding knowledge, vocabulary knowledge, comprehension, inferential reasoning, the writing process, spelling, response to literature”, skills and knowledge taught in schools up to the present so that learners can use the monomodality of black ink on white paper effectively.

More specifically, concerning the writing skill, these can be outlined as: knowledge in grammar and syntax of the language, understanding the meaning of new words, producing well-spelt texts, moving forwards and backwards in the stages of the writing process, word recognition, vocabulary knowledge and inferential reasoning.

### 3.2 New literacies

New literacies build upon foundational literacies but “go beyond them to include new reading, writing, viewing and communication skills required by the many new ICTs that continue to appear in our lives” (Leu et al, 2004:496). Learners, nowadays, create texts, respond to and evaluate texts, comprehend and synthesize information from various multimedia tools; images, hyperlinked texts, sound effects, music, and use them to communicate ideas. In this paper, learners were engaged in tasks so as to practise Information and Media literacies.

#### 3.2.1 Information Literacy

Information literacy entails the ability to access information and images in various forms such as old print media, graphics, photographs, audio and video materials. Additionally, it includes reading, writing, research and communication abilities to such an extent that one can critically access, interpret, process and store print as well as multimedia material (Kellner, 2000).

Moreover, it involves abilities to read, skim and scan hypertexts, websites and information, navigate between links, be aware of safety guidelines, combine different parts of information from various multimedia tools, construct meaning, synthesize and evaluate (Kellner, 1997). Besides, it demonstrates the skills to use search engines in order to organize information (store or retrieve it), cut and paste or reconstruct it for learners’ purposes (Ba et al, 2002).

In addition, Information literacy is defined as the ability to:
a) evaluate information with regard to its quality, authenticity, credibility and usefulness, among different media,
b) comprehend when information is necessary; it serves as a filter to locate and avoid untrue, irrelevant or biased information (Gilster, 1997),
c) access, synthesize and use information appropriately,
d) carry out these practices by using technology and electronic resources effectively (American Library Association, 1989, North Central Regional Educational Laboratory, 2003).

According to Bawden (2008) the information literate learner actually goes through six different stages:
1) recognizing a need for searching information,
2) identifying exactly what kind of information is necessary,
3) accessing the information needed,
4) evaluating the located information,
5) organizing and
6) using this information appropriately.

3.2.2 Media literacy

Media literacy entails teaching with or through media as well as teaching about media. This may entail language, codes and conventions, the analysis of an author’s stance and motives and the critical evaluation of the messages. Kellner (1997) states that this kind of literacy encompasses knowledge of how media work, how meanings are constructed, how cultural pedagogy is served through them or how they operate in everyday life.

Besides, media literacy requires not only traditional print literacy skills but also visual and aural literacy, the ability to analyse narratives and cultural forms. Also, it includes “reading images critically, interpreting sounds, and seeing how media texts produce meaning in a multiplicity of ways” (Kellner, 1989 & 1995).

By and large, media literate people can access, read, understand, evaluate, interpret and criticize media materials, create media products so as to use various media technologies as tools to create, communicate and express themselves (Hendricks et al, n.d., Kellner, 1997 & Semali, 2001). Thus, media creators are those who have created a wiki, stories online, synthesised or co-constructed and used online content into their own creations.

3.3 The development of writing skills

Through Digital storytelling, a ‘writer’ can go further than having a product containing a written text with graphics, photographs or images (Rowsell & Walsh, 2011) and become a ‘producer’ (Sheridan & Rowsell, 2011) by designing and producing a written text that combines images and graphics with sound and movement on screen.

The process of digital storytelling starts as the ‘traditional’ writing process including brainstorming, drafting, peer-editing and re-drafting and it is not a solitary act carried out by an author but a collaborative social effort that is continuous. However, the story is in the foreground and technology in the background, serving as a tool for the final publication and
sharing (Bull & Kajder, 2004); a story “should be remembered for its soul, not the bells and whistles of the technology tools” (Porter, 2006:31). Therefore, from the initial investigation to draft and through the editing and improvement of draft after draft, writing takes most of the lessons’ time.

Moreover, Pennington’s model (1996) of Writing Differently is promoted. According to her, writing is viewed in evolutionary terms and as requiring redrafting (cognitive/affective effects), learners are involved in drafting and revising cycles, generate and process content (process effects). In addition, they produce more intermediate drafts with more content and their creativity is demonstrated by the difference between their initial and final drafts (product effects), (Slouti, 2005). Consequently, Digital Storytelling can serve as a way for learners to Write Differently, promoting Pennington’s model and taking advantage of its potential.

4. The research data and design

Digital technology was embedded into writing lessons in order to create multimodal environments to enhance these lessons and activate a love for learning and creation of powerful stories resulting in a sharing with others. Thus, technology was used instrumentally to motivate Primary School learners to Write Differently, improve writing skills as well as develop foundational and new literacies.

Therefore, the purpose of this research was to explore the potential of Digital Storytelling in the 5th and the 6th grade of primary school learners by proposing an alternative way of teaching and learning writing in English. Particularly, the following research questions were investigated:

- In what ways can Digital Storytelling promote the Foundational literacies of moving forwards and backwards in the stages of the writing process and producing syntactically and grammatically correct, well-spelled texts?
- In what ways can Digital Storytelling promote New literacies and in particular, Information and Media literacies?
- What educational benefits can learners gain from Digital Storytelling convergence in Primary School Education?

4.1 The Teaching/Learning Framework

A series of lessons divided into three different stages were implemented. The first lessons (Stage A) started in mid-October and actually ended in March and aroused learners’ interest in fables through reading a German fable, “The fisherman and his wife” on the computer screen and completing a comprehension worksheet. Thus, they were familiarised with a new form of literacy except the traditional one that on the computer-screen. Furthermore, the teacher built upon the learners’ previous knowledge on writing stories and attempted to ‘mold’ the information to be acquired in such a way that they could comprehend it (realization of Bruner’s (1960) Spiral Curriculum). Then, lessons on a fable in digital format (Stage B), ‘The Stonecutter’ with two ending variations, a Chinese and a Japanese one were carried out. While-viewing, learners completed worksheets and after-viewing they were engaged in a writing task.
By and large, learners were able to understand that digital storytelling can be used for educational purposes. By comparing and contrasting these example fables, learners’ interest in creating such moving images themselves was generated. Meanwhile, Vygotsky’s theory was realized through the scaffolding of tasks by being broken down into smaller steps, demonstrating an idealized version to copy, making learners interested in these tasks, giving them sufficient exposure to the text type (genre), structure and language of a fable before proceeding to the production stage (Stage C).

4.1.1 Implementing digital storytelling

The core stage of the research lasted longer than the previous ones; from January till March 2012. The researchers produced a five-Phase framework (Figure 2) after having taken into account, Barrett’s (2007, 2009), Jakes and Brennan’s (2005), Porter’s (n.d.), Banaszewski’s, Microsoft’s and mainly Ohler’s (2008) proposals of digital storytelling process. Throughout this process, learners had the opportunity to collaborate, make decisions, select, negotiate choice, meaning and relevance with their peers, classify, try out and compare different things (cf. Vygotsky’s theory of scaffolding), develop their Foundational, Information and Media literacies, and peer-assess each other’s’ work.

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<th>PHASE I</th>
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<td><strong>Story planning and Development:</strong></td>
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<td>1. Pre-writing stage</td>
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<td>2. Drafting stage</td>
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<td><strong>Pre-production:</strong></td>
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<td>1. Storyboarding</td>
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<td>2. Search stage: (Gathering and preparing the media resources)</td>
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<td>a. Image planning</td>
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<td>c. Music search</td>
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<td><strong>Production:</strong></td>
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<td>Creating digital stories by using the completed storyboards</td>
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<td><strong>Post-production:</strong></td>
</tr>
<tr>
<td>1. Finalising stories</td>
</tr>
<tr>
<td>2. Peer-assessment</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PHASE V</th>
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</thead>
<tbody>
<tr>
<td><strong>Performance and Distribution:</strong></td>
</tr>
<tr>
<td>Uploading the Digital Stories on a wiki,</td>
</tr>
<tr>
<td>Presenting the stories at school</td>
</tr>
</tbody>
</table>

Figure 2. The Digital Storytelling five-Phase framework

Initially, after voting, the 6th grade decided to write about Aesop’s fable of ‘The goose or hen with the golden eggs’ whereas the 5th grade that of ‘The wind and the sun’. Then, learners
were led through a process of planning, drafting their script, revising, editing and storyboarding.

While storyboarding, learners were responsible to break their stories into components and place them on the storyboard page (Appendix I) by combining their script with their images and music before they began making their digital stories. By showing each scene and describing what happened there, they could visualize how their stories would be pulled together and if there were any defects that could be detected and corrected. Therefore, storyboarding was an essential management tool since learners could view what exactly they would be looking for in the next phase of locating the multimedia tools.

Then participants created or located their media elements including still-frame images, sound effects, music to communicate certain feelings and mood, and audio recordings; some supplemented their script by locating digital images and sound files from online resources while others composed and recorded their own music or drew their images by hand. After that, they selected the elements that best fitted their stories and conveyed the intended meaning and stored them in a file on the hard drives of the computers in the school laboratory.

As soon as the digital elements were saved and organized, learners, with the aid of a manual containing the steps of how to use Windows MovieMaker assembled their digital fables. Their end products ranged from 1 to 2 minutes and included still pictures, narration, music, sound effects and written text. Although narration and its recording were time-consuming, it was worthwhile since learners were able to express themselves not only with their own words but also in their own voices, fostering a sense of individuality and of ‘owning’ their creations. What is worthwhile noting is that all learners, even the weakest ones, willingly participated by selecting what they could actually narrate. After that, the two classes of the 5th grade assessed each other and so did the 6th grade classes by using the Digital Storytelling Rubric. This Rubric contained 9 criteria derived from the elements of digital stories in a four-Likert evaluation scale and was written in Greek, the mother tongue, so that everybody within groups could easily understand what exactly to assess.

Thus, they used constructive criticism adding another dimension to the learning experience. Besides, in these particular teaching sessions, peer-assessment helped each group critically evaluate their own products because by comparing the other digital stories, they could detect any possible defects in their own stories or any effective combinations they had made in contrast to the other stories.

By the time learners were aware of their stories being uploaded on a wiki (i.e., a webpage that is created by multiple authors and all types of media can be easily added including images, links, files and new pages), the quality of their work increased. Besides, by publishing their product, learners acquired ownership and responsibility since their stories became significant on the Internet and did not only exist on paper for the teacher’s eyes. Apart from that, learners meticulously created an invitation for the whole school to watch their digital fables in the Assembly Hall.
4.2 The survey tools

The researchers combined a variety of data collection methods both qualitative and quantitative ones in order to collect the relevant data and cross-check the findings for validity reasons. A mixed methods research was conducted for triangulation purposes since it is an effective strategy to “validate conclusions by presenting converging results obtained through different methods” (Dörnyei, 2007, p. 164) and “contributes to the trustworthiness of the data” (Glesne & Peshkin, 1992, p. 24).

4.2.1 A case study approach

Taking into account the research context and its duration, a case study approach was implemented as the focus was on ‘an instance’ (Adelman et al, 1977), studied relatively in depth within an extended period of time (Bell, 1987). More specifically, it was an ‘instrumental case study’ since the researchers were not interested in the actual case but in understanding if Digital Storytelling being implemented in Primary Education could develop Foundational and New Literacies. Additionally, the case study approach was chosen since according to Adelman et al (1977), its findings are realistic because they are drawn from authentic situations, combining theory with practice.

4.2.2 Quantitative research tools

To start with, in October, learners were distributed an initial questionnaire gathering information concerning their attitudes towards technology integration in a writing class. Then in April, a post-meant questionnaire was handed out. Both questionnaires were efficient, in printed version and written in Greek so as to be user-friendly for all learners and ensure valid data (Wallace, 1998). In addition, the main part of the questionnaires consisted of the same question items.

More specifically, the questionnaires were split into two datasets; Computer Skills and Writing. Except two, all the question items were ‘structured’, closed-ended questions (factual, behavioural and attitudinal ones) and learners had to select their options by circling or ticking. Besides, the Likert-scale questions ranged from “Not at all” to “Very much”. Apart from that, there were two open-ended, ‘unstructured’ questions (a short-answer and a clarification one) to elicit personal information on the part of the respondents.

Although this quantitative research instrument allowed the researchers to collect a large amount of data in short time and in a form easily processed (Dörnyei, 2007), they could not explore learners’ engagement and the complex meanings this would involve. Therefore, they needed to utilize qualitative analysis to add flesh to bones in their research.

4.2.3 Qualitative research tools

The qualitative survey tools were:

- a classroom observation checklist that they devised and used to evaluate the groups’ performance throughout the third stage of the research as objectively as possible and then interpret the data gathered (Bell, 1987), and
• semi-structured group interviews used to shed light on views learners could not express through the questionnaires.

With regard to the observation checklist, a structured, quantitative observation instrument, containing aspects of behaviour with relevance to the research was used (Bell, 1987). This checklist would provide them with direct and reliable information of what learners within groups actually did without relying on what they claimed they did (Bell, 1987).

Concerning its format, the researchers devised systematic categories allowing them to record events quickly and effectively through the use of the Likert rating scale. This scale consisted of statements that characterised groups’ performance and the observer indicated the extent to which this performance was demonstrated by circling one of the responses ranging from 4 to 1 (4 = a lot, 3 = enough, 2 = a little, 1 = not at all). More specifically, the categories focused on writing skills, foundational literacies and new literacies being recorded throughout the five phase-framework with an overall performance and speaking, learning, affective and social skills being recorded in every phase separately. As Allwright and Bailey (1991 cited in Dörnyei, 2007, p. 179) point out, “structured, ‘closed’ techniques may easily miss the insights that could be provided by the participants themselves”. However, the researchers tried to overcome this by combining structured observation with interviews.

Concerning the semi-structured group interviews, they devised an interview guide with a set of pre-prepared question items. These items focused on a) experiences and behaviours, b) opinions and values, c) feelings, d) knowledge, e) sensory information and f) background information (Patton, 2002 as cited in Dörnyei, 2007) so that the researchers could gain an overall view of the learners’ experience. Despite that, the format was open-ended with broad questions about the topic and not ready-made response categories that would limit the learners’ replies. Besides, the Greek language was used during the interviews so that learners’ possible anxiety about making mistakes was alleviated and everybody was given the opportunity to respond without having any misunderstandings. Furthermore, all groups were asked the same question items but not in the same order or even wording.

5. Presentation and discussion of research findings

The descriptive analysis of the collected data paved the way for the juxtaposition and comparison of the results in order to draw conclusions with reference to the research questions and the relevant theory. More specifically, the answers to the initial and the post-meant questionnaires were coded, analysed and their common areas were compared by using the statistical software program, SPSS (Statistical Package for the Social Sciences). Descriptive statistics was used to save time and space by the data being summarised and displayed in Tables and Graphs in terms of Frequencies. This type of statistics could “summarise findings by describing general tendencies in the data and the overall spread of the scores” (Dörnyei, 2007, p. 213). The qualitative data was analysed as well.

The data collected provided research-based evidence on the beneficial effect Digital Storytelling has on the development of both Foundational and New literacies. In addition to these, learners were totally engaged, enhancing multiple skills when they designed, created and presented their digital stories.
5.1 Foundational Literacies & promotion of writing skills

What can be deduced is that learners practised their Foundational literacies to such a great extent that they showed no difficulty when involved in writing tasks (Tables 1 and 2). This fact was also verified by their progress throughout the teaching/learning framework. Particularly, in the lessons of Stage B and C / Phases I and II, learners had the opportunity to acquaint themselves with Foundational literacies. More specifically, they were involved in producing well-spelled texts, syntactically and grammatically correct and moved forwards and backwards to make multiple revisions of their products.

<table>
<thead>
<tr>
<th>Foundational_Literacies</th>
<th>Responses</th>
<th>Percent of Cases²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all</td>
<td>94</td>
<td>136,2%</td>
</tr>
<tr>
<td>Little</td>
<td>125</td>
<td>181,2%</td>
</tr>
<tr>
<td>Enough</td>
<td>164</td>
<td>237,7%</td>
</tr>
<tr>
<td>Very Much</td>
<td>100</td>
<td>144,9%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>483</strong></td>
<td><strong>700,0%</strong></td>
</tr>
</tbody>
</table>

¹ N = participants x options of responses
² Percent of cases = frequencies of the participants and the number of options of responses

Table 1: Level of difficulty before the research

<table>
<thead>
<tr>
<th>Post_Foundational_Literacies</th>
<th>Responses</th>
<th>Percent of Cases²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not at all</td>
<td>210</td>
<td>304,3%</td>
</tr>
<tr>
<td>Little</td>
<td>140</td>
<td>202,9%</td>
</tr>
<tr>
<td>Enough</td>
<td>87</td>
<td>126,1%</td>
</tr>
<tr>
<td>Very Much</td>
<td>46</td>
<td>66,7%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>483</strong></td>
<td><strong>700,0%</strong></td>
</tr>
</tbody>
</table>

Table 2: Level of difficulty after the research

By and large, the researchers tried to blend technology and writing aiming at learners producing authentic and engaged writing. In fact, it was a great way to help learners overcome their possible fear of writing and promote writing as a process and revision as a necessity, having a true purpose. All groups experienced striking success since they discovered the art of writing and saw themselves as writers. More specifically, they chose their words well, found their voice, created a purpose for writing and showed ownership in their stories. Additionally, they were involved in authentic writing because their words, voice, music, and images were honored in the end product.

Besides, throughout the research, the story was emphasized, technology was secondary. The process began similarly to the traditional writing process and included brainstorming, topic
selection and drafting. In the drafting stage of the lessons in Stages B and C - Phase I, as soon as learners got feedback, they rewrote their drafts until they had a satisfactory final product. Moreover, learners judged how well it stuck to the original plan, made suggestions on how to improve the other group’s version or even got additional ideas when they commented on the other group’s first draft.

In the revising stage, peer feedback was form-focused feedback, targeting grammar errors, elements that should have been present in the text (e.g. linking words, time connectors) or the mechanics of writing and entailed constructive comments or proofreading symbols, requiring readers to pinpoint the exact source of the anomaly observed and providing tangible help for the writers. The whole writing process, as Raimes (1985, p. 229) comments, was “not linear at all” but “recursive” since while preparing their text, learners could “loop backwards or forwards” (Tribble, 1996, p. 59) so as to compose it.

Furthermore, Pennington’s model of Writing Differently was promoted since learners used the computer environment to write totally differently from the traditional way with pen and paper. They paid attention to their ideas, their sequence and language through the revision stages. They never showed frustration about editing and re-editing throughout all the stages because their product was real and they could understand the reason why they should make their stories look, sound and feel good. By these means, learners’ work was showcased and the end product was a story available to others to watch and learn from.

5.2 Information & media literacies

As for new literacies, many opportunities throughout the proposed framework had arisen to practise them. More specifically, in all Stages and mainly B and C, learners were involved in Information literacy since they constructed meaning through the combination of information from different multimedia tools; images, sound effects, music, evaluating, by these means, the quality and usefulness of that information to comprehend meaning (Tables 3 and 4).

<table>
<thead>
<tr>
<th>Information_Literacy</th>
<th>Responses</th>
<th>Percent</th>
<th>Percent of Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>Percent</td>
<td></td>
</tr>
<tr>
<td>Not at all</td>
<td>39</td>
<td>14,1%</td>
<td>56,5%</td>
</tr>
<tr>
<td>Little</td>
<td>66</td>
<td>23,9%</td>
<td>95,7%</td>
</tr>
<tr>
<td>Enough</td>
<td>89</td>
<td>32,2%</td>
<td>129,0%</td>
</tr>
<tr>
<td>Very Much</td>
<td>82</td>
<td>29,7%</td>
<td>118,8%</td>
</tr>
<tr>
<td><strong>Total:</strong></td>
<td><strong>276</strong></td>
<td><strong>100,0%</strong></td>
<td><strong>400,0%</strong></td>
</tr>
</tbody>
</table>

*Table 3: Level of Information literacy before the research*

Besides, they also practised media literacy as they were able to evaluate and criticize the way media tools weaved together to convey meaning (Tables 5 and 6).
More specifically, in Stage C, through story mapping (Phase I) and storyboarding (Phase II), learners learned how to weed out unnecessary information and merely stick to those pieces that were essential for their story. They also learned that the visual elements they used could add to their story, replacing many words in some cases. In addition to that, while storyboarding, learners became aware of the fact that not only the chosen font could create visual moods and setting but also the chosen sound could establish tone, mood and emotional context in ways that deepened the effects of the message (Porter, 2006). In other words, learners tried to figure out how meanings were conveyed by using media products and as a result, they developed their media literacy.

<table>
<thead>
<tr>
<th>Post_Information_Literacy</th>
<th>Frequencies</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Responses</td>
</tr>
<tr>
<td>Not at all</td>
<td>10</td>
</tr>
<tr>
<td>Little</td>
<td>29</td>
</tr>
<tr>
<td>Enough</td>
<td>71</td>
</tr>
<tr>
<td>Very Much</td>
<td>16</td>
</tr>
<tr>
<td>Total</td>
<td>276</td>
</tr>
</tbody>
</table>

Table 4: Level of Information literacy after the research

<table>
<thead>
<tr>
<th>Media_Literacy</th>
<th>Frequencies</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Responses</td>
</tr>
<tr>
<td>Not at all</td>
<td>128</td>
</tr>
<tr>
<td>Little</td>
<td>98</td>
</tr>
<tr>
<td>Enough</td>
<td>130</td>
</tr>
<tr>
<td>Very Much</td>
<td>127</td>
</tr>
<tr>
<td>Total</td>
<td>483</td>
</tr>
</tbody>
</table>

Table 5: Level of Media literacy before the research

<table>
<thead>
<tr>
<th>Post_Media_Literacy</th>
<th>Frequencies</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Responses</td>
</tr>
<tr>
<td>Not at all</td>
<td>20</td>
</tr>
<tr>
<td>Little</td>
<td>47</td>
</tr>
<tr>
<td>Enough</td>
<td>1</td>
</tr>
<tr>
<td>Very Much</td>
<td>255</td>
</tr>
<tr>
<td>Total</td>
<td>483</td>
</tr>
</tbody>
</table>

Table 6: Level of Media literacy after the research
On the whole, in the teaching sessions from Phase II up to Phase V, learners developed a discerning eye for online resources. Concerning Information literacy, they passed through Bawden’s six stages since they:

1) recognized a need to navigate the Internet to search for information,
2) identified which particular images, sound effects, music they needed and at the same time avoided any irrelevant information,
3) located the necessary information by developing research skills and information fluency,
4) evaluated that information by critically choosing which fitted their stories successfully.
5) When they organized the downloaded material by storing, and then retrieving it, they cut and pasted it in their files so as to synthesize it and finally,
6) used it effectively to convey the intended meaning in their stories.

Moreover, as for media literacy, learners worked collaboratively to access, interpret, evaluate and criticize media materials (images, music, sound, fonts, and title styles) intentionally in order to create and support their media products. They were able to understand how meanings were constructed through the critical reading of images and critical interpretation of sound. Furthermore, they synthesized and co-constructed the selected material into their own creations. Additionally, learners were totally responsible for aligning their story script with the selected media materials. Consequently, they became more perceptive and critical in analyzing the media they see in the world around them.

Finally, they became acquainted with what kind of digital tool a wiki is and opened new horizons concerning collaborative writing and collective knowledge development.

5.3 Learners’ engagement and skills development

Throughout all the stages of the proposed framework, learners were fully engaged in their tasks and apart from the quantitative results, both the observation and interview ones justified it overtly. They were viewed as active participants, having a sense of control and responsibility for the learning process since they explored, experimented and expressed themselves in the construction of things not only for themselves but also for others. They were “active architects of their own understanding” (Bruner as cited in Wood, 1998:39) because they did not just get ideas from resources, in fact, they used them to create new knowledge; they made hypotheses, selected pieces of information, classified, identified, compared, sequenced and ranked them.

Therefore, constructivist learning was promoted since learning was:

- active and manipulative; learners interacted and explored their potentials in writing tasks and had tangible representations of their manipulations,
- constructive; learners integrated new with prior knowledge to make meaning and
- authentic; they transferred their learning to real-world situations (Parker and Chao, 2007).

Moreover, elements of Sternberg’s Triarchic Theory (1985) appeared in the proposed lessons especially during group work; learners were taught techniques for better memory, re-drafting, problem-solving strategies or how to better relate a task to a previous one. Also, they learnt how to select, negotiate with their peers, try out things and compare.
Furthermore, learners’ technology skills were enhanced making them competent Computer literate through their involvement in this creative process since they acquired confidence in using the Word Processor effectively and gained knowledge of experimenting with Windows MovieMaker software program. There were many examples of learners gaining expertise and becoming peer tutors; an act that boosted their self-esteem.

### 5.4 Interpersonal skills and Collaboration

Last but not least, apart from learning how to write a good story, learners were taught how to collaborate in heterogeneous groups since they worked out what can be used and what cannot be used in the story line, the tone and the dialogue through discussion and knowledge sharing. This fact can be demonstrated by graphs 1, 2, 3 and 4.

![Graph 1: Working in pairs before the research](image1)

![Graph 2: Working in pairs after the research](image2)

(Selected = it helped me working in pairs, Not selected = it did not help me working in pairs)

![Graph 3: Working in groups before the research](image3)

![Graph 4: Working in groups after the research](image4)

(Selected = it helped me working in groups, Not selected = it did not help me working in groups)

Learner collaboration was a learning process where learners used English as a means of communication so as to exchange ideas and information, share experiences, relate, compare, problem-solve and negotiate meaning. When learners were involved in collaborative tasks, they were led to learner autonomy since they assumed an active role, assigned roles and responsibilities and shared authority.
Particularly, learners were involved in joint collaboration since many writers worked on the same text and assumed “equal responsibility for its production in terms of official authorship” (Parks et al, 2003:39). Collaboration also, assisted learners in advancing their Zone of Proximal Development; the gap between what they could accomplish by themselves and what in cooperation with others. Apart from that, because of the fact that language development is the product of social interaction, learners achieved more through cooperation and interaction with others than they would have on their own; what Social- Constructivism with Bruner and Vygotsky advocated.

More specifically, in the drafting stage of the lessons in Stages B and C – Phase I, collaborative writing was promoted as getting learners together automatically meant there was interaction between them (Case, 2009). Additionally, the teacher was not “the only active agent of learning, the one who deposits knowledge into the learners; nor are learners seen as depositories of knowledge”. Learning was no longer viewed as “the product of one individual’s efforts but as deeply connected to the surroundings, tools and the overall context in which the learning takes place” (Elola & Oskoz, 2010:52). In other words, learning was enhanced when learners were able to comment, respond, practise and improve their speaking and listening skills, and mental models through their interaction and sharing of ideas with others.

Additionally, collaboration promoted Gardner’s Multiple Intelligences since all participants were engaged in the learning process; some learners of a group could write while some others could illustrate, paint, search for appropriate music, sound effects or images, even compose their own music. Thus, in Digital Storytelling, learners could take roles that catered for Linguistic, Interpersonal, Logico-mathematical, Visual and Musical Intelligences.

5.5 Suggestions for further research

The results of the present study have provided evidence about the positive impact Digital Storytelling has on Primary School Education. Learners made their first steps in Digital Storytelling by creating digital fables. Undoubtedly, more needs to be investigated about Digital Storytelling as an instructional tool to supplement their books. Further investigations can provide deeper understanding on how Digital Storytelling can fully involve and inform learners of E-Generation in Secondary Education as well.

Multimedia technologies can be used for designing and creating meaningful things. Apart from writing a digital fable, learners can be engaged in designing essays, personal narratives and descriptions of people, places or even objects in digital format. Digital Storytelling can embrace different kinds of genres depending on the teacher’s and learners’ imagination and creativity. Furthermore, it can motivate educators to investigate new ways of collaboration with other schools and form a community of digital storytellers.

6. Concluding remarks

Educators should always keep in mind what Dewey claimed many years ago, “if we teach today as we did yesterday, we rob our children of tomorrow”. Nowadays, literacy is no longer viewed simply as reading and writing. Digital stories can give learners a different kind of meaning making and a different way of knowing (Lowenthal, in Press). Besides, learners in
order to be fluent with the English language should ‘make things’ with the language. Papert and Resnick (1995 as cited in Resnick, n.d.:33) claim that “being digitally fluent involves not only knowing how to use technological tools but also knowing how to construct things of significance with those tools” and this can be achieved through the integration of Digital Storytelling in the writing classroom.

Through this research, Digital Storytelling was used as a vehicle to blend Foundational and New literacy development. Actually, the researchers used Digital Storytelling in order to instruct 69 Primary school learners in the world they live in, the 'Nintendo' one. Thus, they incorporated technology effectively in the classroom and used Digital Storytelling as an instructional tool as well a learning tool in order to promote writing skills through the development of both Foundational and New literacies, learners’ deep engagement and collaboration.

What educators should ponder on is that learners succeed when they are motivated, participate in the lesson, enjoy learning, are not afraid of making mistakes, learn from their mistakes and the teacher both encourages and believes in them. Additionally, group writing tasks may encourage mutual inspiration as well as allow valuable opportunities for shared feedback and support (Mohamed, 2004). Consequently, Digital Storytelling can turn the writing class into a stimulating and pleasurable learning experience.

References


APPENDIX I

By Jason Ohler
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Kosmas Vlachos (kosmasvlachos@yahoo.co.uk) has been a distance learning tutor in the Master’s in Education (M.Ed.) in TESOL programme of the Hellenic Open University (HOU) since 2007. He holds a B.A. in English language and civilization from the Aristotle University of Thessaloniki, a M.Ed in TESOL from the HOU and a Ph. D in applied linguistics and educational technology from the University of the Aegean. His Post Doctoral research in blended learning was conducted in the National and Kapodistrian University of Athens. He has published papers in international refereed journals, encyclopedias and conference proceedings and he is the author and co-author of chapters included in books. He has been a teacher of English in Greek public schools since 1992, the Headteacher of a Primary school and an active member of the Board of the Panhellenic Association of Teachers of the English Language in Greece since 2009. He has offered seminars to teachers in different events in Greece and abroad and has organized workshops for students of the Department of English language and civilization of the National and Kapodistrian University of Athens. His research interests include educational technology, teaching second/foreign languages to young learners, intercultural communication and pedagogy, CLIL, differentiated instruction and teacher education.
Using video games to foster strategy development and learner autonomy within a secondary school context

This paper presents research that focuses on the integration of commercial video games in a Greek Senior Secondary School context with the view to investigating whether such games have the potential to foster the development of language learning strategies and learner autonomy. En route to reaching specific game‐related goals, student gamers had to carry 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.

Η χρήση βιντεοπαιχνιδιών με σκοπό την ανάπτυξη στρατηγικών μάθησης και μαθησιακής αυτονομίας στα πλαίσια της Δευτεροβάθμιας Εκπαίδευσης

Alexandros PALAIIOGIANNIS
Key words: video games, language learning strategies, vocabulary learning strategies, writing strategies, gameplay strategies, learner autonomy, collaborative learning

1. Introduction

As Buckingham (2007) righteously claims, we are going through an “age of digital culture”, where young people constitute the “Digital Natives” (Prensky, 2001a; 2001b), since they are “all ‘native speakers’ of the digital language of computers, video games and the Internet” (Prensky, 2001a, p. 1). There is no doubt that video games are a powerful entertainment tool that opens up new, enchanting, virtual worlds in which every gamer, regardless of age, sex or origin, is admitted and allowed to “experiment with new and powerful identities” (Shaffer et al., 2005, p. 106). This paper raises the question whether this popular entertaining means could be turned into a powerful learning tool, as well.

To this end, the present study mainly explored the various language learning strategies that students employ when playing video games at home and not in a formal schooling context, at their own pace, alone or with peers. These learning strategies were examined in connection to coping with new vocabulary encountered in a video game and the development of students’ writing skills in a “situated learning” (Gee, 2004) mode. In particular, the study investigated whether

- vocabulary comprehension is facilitated by video gaming
- writing skills are developed in a meaningful, motivating way within the virtual environments gamers immerse themselves in
- learning strategies are developed en route to reaching game-related goals
- learner autonomy and independence are fostered through engaging in video gaming.

Along these lines, this paper will firstly present the theoretical background regarding the educational merit of video games along with important considerations about language learning strategies and learner autonomy and then a discussion of the research per se, its findings, its educational implications and, finally, recommendations for further research will follow.

2. The theoretical background of the research

2.1 Theories of learning informing video gaming

The first roots of video games as learning tools can be traced to Dewey’s theories of education, which emphasized the student’s “direct personal experience” (Warde, 1960) and ‘learning by doing’. Similarly, modern video game scholars advocate the process of learning by doing as a defining trait of video games (Aldrich, 2005; Prensky, 2002; Shaffer et al., 2005), which comes in sharp contrast to the traditional instruction mode of “telling” or lecturing (Prensky, 2010, p. 20).

The theory of learning which best describes the design and use of video games for educational purposes is constructivism, whose main tenet is that learners construct meaning...
and knowledge by actively interacting with their environment and reorganizing their mental structures (Phillips, 1995; Resnick, 1989; Tytler, 2002), building upon previous knowledge and experience, which they match against newly-acquired information (Thanasoulas, 2001).

Apart from Dewey, other significant contributors to the constructivist theories of learning are Vygotsky and Bruner, whose views are especially important for the use of video games in educational settings. In particular, Vygotsky advocated social constructivism that placed the individual’s learning “within social and cultural settings” (Kiili, 2005, p. 57), while Bruner’s greatest contribution was the notion of “discovery learning”, which he compared with a discovery expedition (1966), during which learners become active seekers and producers of knowledge, breaking away from the role of passive receivers promoted in traditional classrooms. Bruner placed emphasis on simulation activities, a form of which is role play, which teachers should prepare and organize (Ελληνιάδου et al., 2008, p. 37) if they are to facilitate students’ active participation in self-directed, inquiry-based, problem-centered, experiential learning. Needless to say, nowadays, the natural environment for simulation and role play situations is video games since in most of them players have to “don” the role of a character, ranging from a chef to a detective to an investment banker, depending on the game (Anton, 2010). By assuming different roles, players get to think as those characters, talk, understand the situation, make informed decisions, and act accordingly in order to win the game. This rich experience creates a powerful context for learning (ibid.) or what Gee (2004) calls “situated” learning, i.e. learning situated in the context where it occurs.

Within the constructivist paradigm described above, digital learning environments, which gamers immerse themselves in, aim at supporting learner gamers’ knowledge construction process, either individually or socially (Kiili, 2005, p. 54), depending on whether they play in a single or a multiplayer mode respectively, in the same sense as traditional instruction does in formal educational settings. The difference is that, in the case of video games, the tools used are more appropriate for and adjusted to the “digital generation” (Papert, 1996) of the 21st century, with their personal interests and lives beyond the classroom walls assuming a central role in the learning process and not considered irrelevant or treated peripherally to it.

In more recent years, some other theories were put forward in an attempt for the digital generation’s learning, including the educational merit of video gaming, to be accounted for. These theories include constructionism, connectivism and the flow theory. In particular, Papert introduced “learning-by-making” (1991) as the central principle of his constructionist theory of learning, which places the well-known tenet of learning by doing on a more practical basis since, in Papert’s own words, learning “happens especially felicitously in a context where the learner is consciously engaged in constructing a public entity, whether it’s a sand castle on the beach or a theory of the universe” (1991, p. 1).

Connectivism, or the “learning theory for the digital age”, was formulated by Siemens (2005) with the view to exploring how people learn today, where a great part of instruction does not come from formal school settings but from other sources, namely technology and the Internet, and brings another dimension of education into play. Apart from “know-how” and “know-what”, there is “know-where”, i.e. “the understanding of where to find knowledge needed” (Siemens, 2005). The latter is associated with life-long learning and the concept of “learning how to learn”. The development of this crucial skill constitutes a fundamental goal in most, if not all, educational systems worldwide. This is the case in the Greek context as well, as evidenced in the DEPPS, the 2003 cross-disciplinary Greek EFL curriculum for primary
and secondary education, and even more so in the more recent unified curriculum for the teaching of foreign languages in state schools, the EPS-XG (2011).

Siemens’ claim that “[l]earning may reside in non-human appliances” (2005) can make a case for the integration of video games in educational contexts and their use as learning tools. In line with connectivism, what bonds gamers together is their common interest in video gaming and digital technology, which urges them to seek solutions to puzzles and problems encountered in virtual worlds, even by joining online gaming communities - what Gee (2004; 2005) calls “affinity spaces”. It is a very common practice nowadays, thus contributing to the construction and propagation of knowledge worldwide.

Finally, Csikszentmihalyi’s flow theory (1990) is considered central to video games (Squire, 2011), since it describes the state of completely focused motivation, absorption and immersion in the task at hand, which “becomes intrinsically rewarding, done for its own sake” (Stevison and Kaplan, 2010, p. 155), a state that video games are believed to foster and favour. Game designers manage to keep players in such “flow” states, in which educators would like to see learners in formal instruction settings, as well, but, in fact, “few current curricular practices are designed to foster” (ibid.).

### 2.2 Video games as learning tools

Hays (2010) provides a concise but accurate definition of video game as “an artificially constructed, competitive activity with a specific goal, a set of rules and constraints that is located in a specific context” (p. 251). Video games are often classified into educational games known collectively as “edutainment” (Prensky, 2010, p. 21), in an effort to combine entertainment with educational purposes. Commercial off-the-shelf (COTS) games, which are designed and created for pure entertainment purposes, have succeeded in captivating their audiences in ways that no educational application has managed to do so far.

Coming to the reasons advocating the integration of video games in educational settings, it must have become obvious from our discussion by now that the design and creation of most video games are based on sound learning principles. Various arguments in favour of the integration of video games in educational contexts have been put forward in the relevant literature, although research into this newly emerging field is quite recent and still in progress. In particular, through video games students “experience a sense of autonomy” (Stevison & Kaplan, 2010, p. 152), since players are continuously asked to “make active choices in simulated settings”, simultaneously developing their critical thinking skills on “a multilayered platform of insights and discoveries” (ibid.). Video games also offer opportunities for differentiation, by catering for different learning styles, in line with Gardner’s Multiple Intelligences theory (1983), mainly through the use of multimedia. Besides, they provide student gamers the facility to archive and return to their learning, by allowing them to save information that is often impossible to record and store through traditional means, at various points during gameplay. Needless to say, the latter holds great advantages for teachers too, since they can “track[…] students’ progress, return[…] to previous assignments and provid[e] repeated instruction of needed or favorite lessons” (Stevison & Kaplan, 2010, p. 153). Finally, students are also exposed to technology, practicing where they can develop and practice vital skills for the 21st century.
2.3 Language learning strategies: definitions and classifications

Following Oxford (1990, p. 1), learning strategies can be defined as “steps taken by students to enhance their own learning”, and their being “tools for active, self-directed involvement, which is essential for developing communicative competence”, render them particularly important for language learning purposes. Such strategies can ultimately lead to learner autonomy, “learning how to learn”, and life-long learning skills development, which are the ultimate goals of any educational system designed for the 21st century global citizen, the Greek system being no exception. In practical terms, strategies are deliberate, intentional, goal-directed actions undertaken by learners until they become automatic, through extensive practice, and transform into unconscious habits (Oxford, 2011).

Although the literature is rife with various strategy classifications and distinctions, both general (Manolopoulou-Sergi, 2004; O’Malley and Chamot, 1990; Oxford, 1990; Oxford, 2011; Papaeftymiou-Lytra, 1987) and vocabulary- (Gu and Johnson, 1996; Nation, 2001; Schmitt, 1997) or writing-specific (Arndt, 1987; Mu, 2005; Riazi, 1997; Sasaki, 2000; Victorri, 1995; Wenden, 1991), which are especially related to the research in question, the present study draws mainly from Oxford and her well-known classification system (1990), since it is considered the most influential to date. Oxford’s taxonomy consists of two broad categories, namely direct and indirect strategies, which are further subdivided into a total of six groups – memory, cognitive and compensation under the direct category, and metacognitive, affective and social under the indirect category.

2.4 Learner autonomy: definitions and important considerations

Closely linked to learning strategies is the concept of learner autonomy, which has lately become a fundamental goal of foreign language education. Autonomy can be broadly defined as “the capacity to take control over one’s own learning” (Benson, 2011, p. 2), while, with regard to strategies, autonomy could also be described as “the capacity to make use of strategies that are clearly associated with the idea of control of learning” (ibid., p. 97).

According to Benson (2011, p. 2), one necessary condition for the development of autonomy is providing learners with opportunities to exercise control over their learning. Given the nature of language learning, which is enhanced by interaction with others, thus autonomy assuming a social aspect, control becomes “a question of collective decision-making rather than individual choice” (Benson, 1996, p. 33). In the present study, learners were given the opportunity to “take responsibility for their own learning and to apply active, personally relevant strategies” (Littlewood, 1997, p. 81). To this end, they were asked to play a video game out of the formal schooling context, at home, either alone or in pairs/groups, without the physical presence of the teacher.

3. The research design

3.1 The sample population

The research was conducted with a group of twenty 16-year-old students, attending the first grade of a Senior High School in a Greek provincial town. A non-probability sampling strategy was used, and in particular ‘convenience or opportunity sampling’, since the sample was a class the teacher-researcher taught at the time of the research and thus the selection was
based on such criteria as availability and easy accessibility (Dörnyei, 2007, pp. 98-99). The sample consisted of twelve female and eight male students comprising a mixed-ability class, as is usually the case with Greek state schools, whose English language proficiency level mainly ranged from waystage (A2) to vantage (B2), according to the Common European Framework of Reference for Languages (Council of Europe, 2001), while there were a female effective operational proficiency (C1) level and a male mastery (C2) level student among them.

Within this context, the researcher had to select a video game that would potentially engage the majority of the participants and serve the purposes of the study well.

3.2 Selection criteria of the video game

The video game selected and used for the research was Agatha Christie: Murder on the Orient Express (The Adventure Company, 2006), a COTS game, for a variety of reasons. Firstly, mysteries, detective stories and thrillers appeal especially to teenagers, who find them interesting and engaging, as the specific target group confirmed as well. Second, the whole game is based on dialogue as well as written notes and letters, and whether players proceed in the game or not depends on their understanding of the target language. This served the purposes of the research since players are forced to employ strategies in order to deal with vocabulary difficulties and move on. Another important criterion is that the train passengers in the game come from different countries and players are, thus, exposed to World Englishes, namely different varieties of English belonging both to the inner as well as the expanding circles of countries where English is spoken, in line with Kachru’s (1985) well-known categorisation⁵. At the same time, they have the opportunity to become acquainted with slang terms or expressions some characters in the game often utter, and the fact that learners are not usually exposed to such terms within formal education settings makes it even more imperative that they resort to strategies in order to cope.

Finally, the game is based on a famous novel by the same title, written by Agatha Christie, and some students might have heard about the story or seen a movie based on the book, too. This information could activate their background schemata and help them overcome or anticipate certain difficulties as far as the storyline is concerned. Nevertheless, there is a twist in the end that differentiates the game from the book, with the view to keeping even those familiar with the plot engaged and interested.

In particular, players have to don the main character of the game, wander in a virtual world, seek clues that might reveal the identity of a murderer, solve a number of simple and more complex puzzles as they proceed in the game, collect fingerprints and footprints, and interrogate suspects until the true identity of the killer is revealed in the end; in other words, they have to act the same way the police would in real life.

3.3 The research methods

The researcher selected the so-called “mixed methods research” (Creswell et al., 2003) as the most appropriate and effective means to collect data within the specific context. This means that both qualitative (QUAL) and quantitative (QUAN) research were employed in an attempt to combine the case-specificity and subjectivity of the former with the objectivity and generalizability of the latter, when it comes to the analysis of the data collected.
Nevertheless, despite drawing from both QUAL and QUAN research, mixed methods designs usually “display a dominant method” (Dörnyei, 2007, p. 63). Within this mixed methods research paradigm, the main method employed was the case study, namely the study of the “particularity and complexity of a single case” (Stake, 1995, p. xi), which lies within the QUAL research paradigm, enhanced by QUAN research practices. The sample described above constitutes the ‘case’ the present research focused on.

3.4 The research instruments

As mentioned above, the instruments employed for this study belonged both to QUAL and QUAN inquiry fields, namely a number of diaries, in which students had to make entries at various points during the research, and a final questionnaire administered at the end of the research respectively. Through the use of more than one instruments coming from both QUAL and QUAN fields, triangulation is effected, which allows the researcher to “confirm or challenge the findings of one method with those of another” (Laws et al., 2003, p. 281), thus contributing to the improvement of research validity and maximizing reliability at the same time. A third concept playing a pivotal role in research settings is the generalizability of the findings, what certain writers (Eisenhart and Howe, 1992; Lincoln and Guba, 1985) refer to as “comparability” with other similar research findings and “transferability” to similar situations, which can also be increased by evidence obtained through the use of multiple methods (Dörnyei, 2007, p. 46).

The main research instrument constructed to serve the purposes of the present research and coming from the QUAL research field was diaries. To initiate diary writing at certain points during the game, the researcher had entered written prompts and hints as to what kind of entry students were expected to make each time. In the third and final diary, students were invited to reflect on their whole gaming experience and even make suggestions for future similar projects (see Appendix).

The second data collection instrument, a questionnaire, belonged to the QUAN research field and aimed at complementing and enhancing the data collected through the diaries. To this end, a great number of items - on rating scales and a Likert scale - focused on behavioural issues, namely the particular actions student gamers took to deal with vocabulary and writing difficulties as well as problems encountered regarding gameplay per se. Other items addressed the respondents’ beliefs about and attitudes towards the whole video gaming experience and the effects the latter had on them as foreign language learners, in terms of vocabulary learning, writing skill development and learner autonomy (for the research instruments see Palaiogiannis, 2012).

3.5 The procedures followed

The research lasted from November 2011 to March 2012. On the basis of such factors as distance, the relationship the participants had with each other beyond class time, and personal preference, one group of three and three pairs were formed while the remaining eleven students played alone.

The video game consists of three distinct parts, but the research focused on the first two parts, during which students had to carry out specific vocabulary and writing game-related tasks, prepared and handed out to them by the teacher researcher prior to their engaging in
each of the corresponding game parts. The tasks aimed at making gameplay meaningful and purposeful for their learning and not just a purely entertaining activity, and keeping them focused on certain aspects of the game that were prompted to “notice”, in line with Schmidt’s (1990) Noticing hypothesis. This noticing process would serve the purposes of the present study, such as the realization of the need to employ specific strategies if they wanted to cope with difficulties and advance the storyline. Several briefing and debriefing sessions, “critical” conditions for the integration of video games into educational settings (Betrus and Botturi, 2010, p. 49), preceded and followed video game playing respectively, taking place in the regular EFL classroom. During these sessions, language as well as gameplay problems were brought to the fore, solutions were suggested, and opinions were exchanged and commented upon both by the teacher and students alike.

Since the greatest part of the research was conducted outside the school context, without the presence of the teacher to provide support or guidance if any such need arose, the researcher set up a group on the Facebook called The Murder On The Orient Express Game Group, which all research participants could join, establishing an online learning community. Within this community, information flow could take place, members could provide feedback to each other and seek solutions to problems encountered in the virtual world of the video game.

At the end of each part, which was temporally predetermined and commonly agreed upon by both the researcher and the participants, the students had to carry out a writing task in the school’s computer lab. To this end, the process writing approach was adopted as the most compatible with the application of strategies any writer normally resorts to, through the recursive stages of generating ideas, focusing, structuring, drafting, evaluating and reviewing, as presented in White and Arndt’s well-known model (1991). The participants had to write letters as the main character to their employer, informing him about the progress of the murder investigation, any potential suspects and so on. In this way, situated learning took place through role-play, game-based activities that facilitated students’ active participation in a powerful context for learning. All procedures are illustrated in Figure 1 below.

Figure 1. The procedures followed during the research
Participants had to submit three diaries, the first two after finishing each corresponding game part and the last one upon reaching the end of the game. The final questionnaire was firstly piloted on a sample similar, in terms of sex, age and interests, to the target sample with the view to ensuring that respondents in the actual study would experience no difficulties in completing the instrument, regarding the “clarity of wording” (Cohen et al., 2007) either in the items per se or the instructions, the time taken to complete it, or its difficulty level.

4. The research findings

4.1 Practical considerations

As regards the diaries, qualitative content analysis (Dörnyei, 2007) was employed, in that specific patterns and themes were identified in the data (Dörnyei, 2007; Taylor-Powell and Renner, 2003), on the basis of which relevant categories were established. To protect the participants’ anonymity, during the diary entries as well as the questionnaire data analysis, identification numbers were assigned to them ranging from S1 to S20 (where S=Student) while, for comprehensibility purposes, some participant entries were slightly edited by the researcher. Besides, some aspects of the data were ‘quantitised’, in other words converted into numerical codes (Dörnyei, 2007), in an effort to integrate it with its quantitative counterpart used in this research, in line with a most common practice within the mixed methods data analysis field, namely ‘data transformation’ (Miles and Huberman, 1994; Tashakkori and Teddlie, 1998).

Both the ‘quantitised’ qualitative data coming from the diaries and the quantitative data that the questionnaire yielded were subjected to statistical analysis through the use of a statistical package widely employed in applied linguistic research, SPSS.

4.2 The analysis of the data

Following Oxford (1990) and in line with other strategy taxonomies (Gu and Johnson, 1996; Mu, 2005), the questions on vocabulary and writing strategies were placed into specific categories. In particular, in the vocabulary section of the questionnaire, the questions were categorized as cognitive, compensation, social or metacognitive strategies. In the same vein, in the writing section, they were categorized as metacognitive, cognitive, social or compensation strategies. The participants who gave at least one positive response (sometimes, often or always) to a question belonging to a specific category are supposed to have resorted to that category during gameplay, while those who have provided negative responses (never or rarely) to all questions of a category have not used it. Along these lines, with regard to vocabulary, 90% employed compensation strategies, 80% employed cognitive and social strategies while 65% resorted to metacognitive strategies (Chart 1). As regards writing, all (100%) used both metacognitive and cognitive strategies, 85% resorted to social strategies while 80% employed compensation strategies (Chart 2).

The diaries yielded some important data concerning the participants’ attitudes towards vocabulary and writing. In particular, 70% found the vocabulary tasks they carried out in class, at the pre-gaming stages, helpful during gameplay. As regards the latter, 75% felt excited about the writing task in the computer room and all (100%) expressed positive feelings about the process of collaborative writing (Chart 3).
Turning to gameplay, by analogy to the vocabulary and writing strategies classifications illustrated above, the researcher classified three questions in the questionnaire section on gameplay as social strategies, since they were based on collaboration and face-to-face interaction, while the rest were treated as separate, stand-alone categories. In this vein, the analysis showed that the vast majority of the participants (95%) employed social strategies to deal with difficulties regarding the game per se, 60% replayed certain parts of the game to make sure they had made the right moves or decisions, 40% visited the Facebook group site, set up by the teacher, to ask for help, while 15% searched the Internet for possible solutions (Chart 4).
With regard to participant beliefs and attitudes about the whole video gaming experience, 90% agree that playing the video game helped them understand new vocabulary, 90% agree that understanding the meaning of new words helped them solve problems and move on in the game, 30% believe that writing letters as the main character of the game gave them a real life purpose for writing, while 50% believe that writing letters as the main character of the game made video gaming an interesting experience to them. Finally, 60% agree that writing in collaboration with their classmates made them feel more confident and 55% believe that playing the video game at home, making their own decisions about their own learning, made them feel more independent and autonomous as learners (Chart 5).
The data was statistically analysed through the performance of certain tests, namely Chi-Square tests and especially Fisher’s Exact Test, due to the small sample size, to check whether a statistically significant correlation between variables existed. The tests were performed at the level of significance \( p=0.05 \), meaning that any \( p \)-value<0.05 constituted a statistically significant difference, which indicated a strong correlation between the variables checked each time. The findings showed a statistically significant correlation between:

- vocabulary social strategies and gender \( (p=0.014<0.05) \), with all female participants (100%) and only half of the male (50%) employing social strategies to tackle vocabulary problems.
- vocabulary social strategies and the belief that playing the game at home and making their own decisions regarding their own learning made the participants feel more independent and autonomous \( (p=0.026<0.05) \). Specifically, all of those (100%) who feel that way employed social strategies to deal with vocabulary, while only 55.6% of those who disagree did.

The Pearson Chi-Square test of independence was also performed to check whether the participants’ feelings were associated with the other variables involved in the research. The findings indicated a statistically significant correlation between:

- the participants’ feelings before playing the game and the belief that playing the game helped them understand new vocabulary \( (p=0.021<0.05) \). 92.3% of the ‘excited’ and all (100%) ‘nervous’ and ‘bored’ students believe that the game helped them understand new vocabulary, while the remaining ‘indifferent’ student does not believe so.
- the participants’ feelings while playing Part 1 and the belief that understanding the meaning of new words helped them solve problems and move on \( (p=0.036<0.05) \). All (100%) ‘excited’ and ‘nervous’ gamers believe that understanding the meaning of new words during gameplay helped them, while 60% of the ‘bored’ gamers share the same belief.
- the participants’ feelings while playing Part 2 and the belief that playing the game helped them understand new vocabulary \( (p=0.036<0.05) \). All ‘excited’ and ‘bored’ gamers (100%) share that belief, while only 60% of the ‘nervous’ gamers do.
- the belief that the vocabulary tasks in the pre-gaming stages helped the participants and the one that playing the game at home and making decisions about their own learning made them feel autonomous as learners \( (p=0.024<0.05) \). 71.4% in favour of the vocabulary tasks believe that the video gaming experience made them feel more autonomous, while only 16.7% of those that did not find the vocabulary tasks helpful share the same belief about autonomy.

### 4.3 The interpretation of the data

The findings were be evaluated and interpreted in regard to the research questions of the present study. The first research question refers to whether video gaming can facilitate students’ understanding of new vocabulary. The vast majority (90%) of the specific sample believe that understanding new vocabulary and video gaming are linked to each other (Chart 5), since the former enhances the latter and vice versa. In this vein, video gaming promotes purposeful, meaningful vocabulary learning in a way that formal education cannot, since only by understanding new words encountered in the digital worlds of video gaming can gamers come up with solutions to problems and move on in the game. The evidence
provided by the statistical analysis indicates that almost all participants, regardless of their feelings, felt that gameplay and vocabulary learning were positively interrelated at some point during the game (see section 3.2).

The second research question refers to situated learning and specifically whether video games provide students with a context that will help them develop their writing skills in a meaningful, motivating way. 75% of the participants expressed their enthusiasm for this situated writing (Chart 3) in their diary entries since “it was just like [they] had lived this event in real life and [they were] a real detective [themselves]” (S20, diary 1). In terms of gender, 30% were male and 45% were female, comprising 75% and 74.9% of the total male and female sample population respectively. This means that the vast majority of the male and female participants were in favour of having their writing skills developed, while acting as the main character of a video game.

Regarding the third research question, this study also explored whether video games foster the development of learning strategies while gamers try to reach specific goals during gameplay. All learners employed strategies in order to deal with vocabulary and writing difficulties, otherwise they wouldn’t be able to solve problems and advance the storyline. In particular, regarding the former, most recruited compensation strategies (90%, Chart 1), which is understandable due to the great work load they admittedly encountered during gameplay, while with regard to writing, all learners (100%) used metacognitive and cognitive strategies, followed by social (85%) and then compensation strategies (80%, Chart 2). The evidence also indicates that video gaming and the various technical or storyline difficulties, encountered during gameplay, favour especially collaboration and the use of social strategies among gamers (95%, Chart 4). The evidence provided by statistics indicates that all female participants showed a preference for social strategies to deal with vocabulary, which might be suggesting that girls are more in need for support and encouragement when it comes to a genre stereotypically associated with boys, while social strategies were also evidenced to be associated with those who felt more autonomous during gameplay since all of the latter (100%) employed such strategies.

With regard to the last research question, the present study attempted to investigate whether video games facilitate learner autonomy and independence. The majority of the participants believe that the video gaming experience made them feel more autonomous and independent and collaborative writing boosted their confidence (55% and 60% respectively), a feeling often associated with autonomy (Chart 5). Collaborative writing and autonomy are associated with social strategies and the majority of the sample population (100% female, 50% male) used such strategies. Besides, the statistical tests indicated that those who found the vocabulary tasks in the pre-gaming stages helpful were the ones who expressed feelings of autonomy, meaning that they considered teacher support conducive to the development of their autonomy and independence.

5. Teaching implications, limitations and recommendations for further research

5.1 Teaching implications

On the grounds of the specific research and the relevant literature, fruitful conclusions can be drawn, regarding the integration of video games in educational settings and its effects on the teaching and learning process.
First of all, games are one of the best methods to motivate learners intrinsically since they can be fun and highly engaging, thus turning the learning process into a meaningful and memorable experience. Besides, video games foster skills “immediately generalizable” to real-life situations (Prensky, 2006, p. 8), such as reasoning, problem-solving and decision-making.

Through video games collaborative learning is promoted and students develop cooperative learning skills as they work in partnerships or small groups having synchronized goals and objectives (Stevison and Kaplan, 2010, p. 152). This is a very important point since collaborative learning and social strategies employed during gameplay were evidenced to be closely associated with participant feelings of autonomy and independence in the present study. In this vein, by engaging students in video gaming tasks that involve and presuppose collaboration, the teacher can facilitate the development of autonomy and life-long learning skills among learners. The engagement in such projects also seems to contribute, as the present research showed, to the establishment of a friendly rapport between the teacher and the learners in a non-threatening, supportive environment for everyone involved.

An important principle, which is built into video games and supports their use as powerful learning tools, is the “multimodal principle” (Gee, 2007). Video games aim at familiarizing students with multiple modalities, that is the combination of written words, sounds, still or moving images and video to convey messages, which Digital Natives have to master if they are to survive and succeed in the technologically demanding world of the 21st century. To refer back to the Greek context, this familiarization with multimodal texts is also emphasized and promoted as a fundamental goal of foreign language instruction by the new, unified curriculum, the EPS-XG (2011), and video games could help in that direction.

5.2 Limitations of the present study

Since this was a small scale research, it cannot be considered representative of a population. We cannot be really sure that the results of the study can be generalizable and transferable to similar situations since the selection of a different video game for use with the same sample or the use of the specific game with another sample of the same age and characteristics could easily yield quite different results.

In the same vein, the limited number of the subjects – a class of twenty students in total – might have played, to a greater or lesser extent, a decisive role in the experiment, ultimately influencing its results.

5.3 Recommendations for further research

First of all, learners could play a video game in the school’s computer lab, instead of home, over a whole school year, which would allow the researcher to observe their behaviour during gameplay and draw fruitful conclusions. Participants have expressed their wish to do something like that in school not only in English but other subjects as well (see Appendix), which could lead to cross-curricular projects and open up new educational possibilities and perspectives.
Furthermore, it would be interesting to see how conventional, standard instruction compares with innovative, alternative teaching approaches, by setting up an ‘experimental design’ (Dörnyei, 2007) with a ‘control’ and a ‘treatment’ group of students sharing similar characteristics and attending the same class. The former could be taught through conventional teaching methods, while a video game, computers and software could be used to teach the latter, promoting collaborative learning and group work. Certainly, such a study could yield important insights, which would inform future teaching practices.

6. Conclusion

On the basis of the research participants’ diary writing and questionnaire responses, positive evidence for the use of video games as learning tools was yielded since they employed a variety of strategies to cope with vocabulary, writing, as well as gameplay difficulties, and reach various goals set during gaming. A great number of the participants also expressed positive feelings about writing as the main character of the game since they got into the skin of their role and gained insights into the game. Not surprisingly, all learners showed their approval and appreciation of the collaborative learning procedures, which, in turn, were evidenced to be associated with participant feelings of autonomy and independence.

This research and its findings will, hopefully, pave the way for the implementation of educational innovations, by providing teachers with insights into and inducing them to reflect on the innumerable possibilities they have at their disposal, especially due to the advent of new technologies and the students being enchanted and allured by them (Beastall, 2006).

Notes

1. According to the categorisation that Kachru (1985) devised, the English-speaking world is divided into three concentric circles: the inner, the outer, and the expanding circle. The outer circle comprises countries in which English is spoken as a first language, such as Britain, the United States and Australia, the outer circle includes countries in which English is used as a second language, such as Singapore, India or Nigeria, while countries where English is learnt as a foreign language for commercial or cultural purposes, such as China or Greece, belong to the expanding circle.
2. “[Statistical] Significance is measured by a probability coefficient (p) … In social sciences we typically consider a result significant if p < 0.05, that is, if the probability of the result not being real but only due to chance… is less than 5 per cent” (Dörnyei, 2007, p. 210).

References


APPENDIX

PARTICIPANTS’ SUGGESTIONS FOR FUTURE PROJECTS

- No tasks or diaries next time because they were tiring!
- I wish school were more organised and we could play video games in it!
- It would be good if such projects were done at school because they make it easier for students to learn foreign languages.
- I believe it is the best educational method for learning English, it would be great if this was done all over the country.
- Next time I would try something like that, I would like it to be shorter, have more suspense and the vocabulary to be more familiar to me at some points.
- Something like that would be great for a school project because we would learn many things in English such as new words and all this having fun at the same time.
- It would be nice to do such projects in other subjects as well because we learn to collaborate with our classmates better.
- I would prefer all of us to work necessarily in groups next time so that weaker students could be helped more.

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Designing and implementing a Webquest in an EFL young learners context

Σχεδιάζοντας και εφαρμόζοντας μια ιστοεξερεύνηση σε παιδιά στο μάθημα των αγγλικών

Christina POPOTA

This paper presents the design, the implementation and the findings of an action research conducted in fifth and sixth graders of a Greek state primary school. The research aimed 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. The researcher used both quantitative and qualitative ways for collecting data, two questionnaires, classroom observation checklists and interviews. The findings showed that the Webquest succeeded in enhancing pupils’ learning through its potential.

Η εργασία αυτή παρουσιάζει το σχεδιασμό, την εφαρμογή και τα ευρήματα μιας έρευνας διδακτικής πράξης που έγινε σε μαθητές της πέμπτης και της έκτης τάξης ενός Ελληνικού δημοσίου σχολείου. Στόχος του πειράματος ήταν να εξετάσει αν η χρήση ιστοεξερεύνησης στο μάθημα των Αγγλικών μπορεί να βοηθήσει τους μαθητές να αποκτήσουν νέους πολλαπλούς εγγραμματισμούς και ικανότητες ανώτερης σκέψης, να αναπτύξουν πολλαπλές νοημοσύνες και στρατηγικές. Επίσης, διερευνά αν η ιστοεξερεύνηση μπορεί να έχει θετικό αντίκτυπο στην αύξηση των κινήτρων τους, στη μείωση του άγχους και στη δημιουργία πιο θετικών στάσεων απέναντι στην αγγλική γλώσσα.

Key words: young learners, new literacies, multiple intelligences, reading strategies, Webquest, high-order thinking skills, motivation, stress, attitude
0. Introduction

The advent of the Internet and the World Wide Web has changed the notion of the language classroom and has created new potential for English language teaching. The rationale behind the design of this experiment lies in the teacher’s desire to determine how a Webquest can help children acquire new literacies and critical thinking skills, promote their intelligences and reading strategies, increase their motivation, reduce stress and finally create positive attitudes towards reading in English.

1. Literature review

In a review of research investigating the impacts of Webquests on the multiple facets of teaching and learning, Abbit and Ophus (2008) found that this instructional strategy may have a positive effect on learner attitudes, perceptions and collaborative work skills. In these studies, attitudes were generally positive towards Webquests and the structure of the activity itself helped students’ ability to identify context, main ideas in readings, key information in linked resources and locate higher quality resources. Moreover, collaboration among pupils was fostered and a higher level of cognitive presence than in other activities was demonstrated. However, the research that has been reported shows that there is little advantage for enhancing students’ achievement.

Other researchers support similar findings as well. Pelliccione and Craggs (2007) found that Webquests promote cooperative learning by assigning roles to the learners and demanding them share their results with their group. In Grove’s (2003) action research higher-order thinking skills, collaboration and motivation are enhanced, too. Furthermore, findings from Ikpeze and Boyd’s (2007) study suggest that Webquests can serve as a tool of facilitating thoughtful literacy through carefully selected, organized and delivered tasks, which give opportunities for collaboration, thoughtful connections and critical reading.

Another recent study is Prapinwong’s (2008, in Zlatkovska, 2010). She concludes that the pupils were motivated, optimistic and had a positive attitude but they were confused by the complexity of the resources. Zlatkovska (2010) proposes further research on the use of Webquests in EFL. Murry (2006) also indicated that the use of the Webquest promoted higher-level thinking skills through sequenced activities but some learners were frustrated because of inactive links and difficult reading and writing activities. Besides the scope of recent studies, there are not many Webquests for English as a foreign language in the Greek educational context. Therefore, there is a need to further investigate WebQuests in a context of Greek primary learners.

Specifically, the researcher attempted to answer the following questions:

- How do Webquests help young pupils acquire new literacies and high order thinking skills?
- What intelligences and reading strategies can the teacher promote through teaching with WebQuests?
• What are the effects of WebQuests on young learners’ motivation, stress factor and attitude towards reading in English?

2. The theoretical framework

2.1 New literacies and thinking skills

Changes to literacy have been created by new technologies and especially the Internet. The Internet requires the development of new skills to benefit from its potential for information and learning (Coiro, 2003; Leu, Kinzer, Coiro and Cammack, 2004, in Leu, n.d.). The new literacies include “the skills, strategies, and dispositions necessary to successfully use and adapt to the rapidly changing information and communication technologies and contexts that continuously emerge in our world and influence all areas of our personal and professional lives” (Leu, Kinzer, Coiro and Cammack, 2004, p. 1570). New literacies build on foundational literacies for instance, phonemic awareness, word recognition, decoding, vocabulary knowledge, comprehension, inferential reasoning and spelling. Through the new literacies we can identify important questions, locate information, critically evaluate that information, synthesize information to find the likely answers to those questions and communicate the answers to other people (Leu et al., 2004). New literacies are important because they create chances for a more understanding and more literate world (Leu, n.d).

Critical thinking skills are associated with Bloom’s Taxonomy of the cognitive domain. Bloom identified six levels of thinking skills ranging from the lower order where there are knowledge, comprehension and application to the higher level where we have analysis, synthesis and evaluation. Analysis involves learners breaking something down into constituent parts (Manolopoulou-Sergi, 2004; Spinthourakis, 2004). Students distinguish, classify and relate assumptions and hypotheses of a problem (Bloom, 1956, in Huitt, 2009). Synthesis requires them to integrate and combine knowledge into a product new to them. When making evaluation, they judge and critique based on specific criteria.

2.2 Multiple Intelligence and reading strategies

One of the researcher’s questions was to investigate what intelligences the teacher can promote through Webquests so it would be helpful to explore this theory too. Gardner distinguished at least seven basic intelligences. Recently he added an eighth and suggested the possibility of a ninth (Gardner, 1993; 1999, in Armstrong, 2009). More particularly, learners possess linguistic intelligence (The ability to use effectively the structure, the sounds, the meanings and pragmatics of language both orally and in writing – Armstrong, 2009), logical-mathematical intelligence (sensitivity to numbers, logical patterns or relationships and abstractions. Categorization, inference and hypothesis testing are some of the processes that are used – Armstrong, 2009), bodily-kinesthetic intelligence (the ability to control and use the body for solving problems and making products – Baum, Viens and Slatin, 2005), spatial intelligence (the ability to represent the spatial world mentally in mind. It also refers to the capability of understanding and transforming visual information in mind and making images from memory – Baum, Viens and Slatin, 2005), intrapersonal intelligence (concerned with being happy on one’s own, knowing oneself and becoming aware of one’s
feelings and wishes – Puchta and Rinvolucri, 2005), interpersonal intelligence (the ability to listen to what others say, establish good relationship with them and be skilful at negotiation and persuasion – Puchta and Rinvolucri, 2005), musical intelligence (the ability to understand and articulate parts of music including melody and rhythmic patterns – Armstrong, 2003), naturalist intelligence (the capability to identify and classify species in nature and to relate oneself to living things or ecosystems – Armstrong, 2003) and existential intelligence (the capacity to understand processes in a large, existential environment, such as the classroom and the community; it gives pupils the ability to summarize and synthesize knowledge from various sources and disciplines – Mckenzie, 2005). Intelligences can develop and grow and everyone has each of them (Fleetham, 2006).

Additionally, intelligences are combined complementing each other and they are rarely used independently (Brualdi, 1996). Teachers should value all intelligences equally. This challenges an educational system that supposes that everybody learn the same material in the same way (Gardner, 1999, in Manolopoulou-Sergi, 2004). By triggering a broad range of intelligences, a teacher can enhance a deeper understanding of the material. Consequently, students will feel more appreciated by the teacher, better achievers in the foreign language classroom and more determined to take risks (Puchta and Rinvolucri, 2005).

Reading for young learners should be a two-way process in which they use both their knowledge of graphemes, phonemes and knowledge of language and the world (Zouganeli, 2004). When involved in reading comprehension children make use of strategies. Strategies are decisions consciously taken by the reader and they are responses to problems (Urquhart and Weir, 1998, in Calfoglou, 2004). Grabe and Stoller (2002) also suggest a number of reading strategies, which are plans for understanding questions arisen in construction of meaning (Duffy, 1993, in Janzen, 2002). Encouraging pupils to use these strategies facilitates them to understand both spoken and written texts more adequately (Brewster, Ellis and Girard, 2003). The researcher incorporated some of them in the questionnaires to check whether they are developed through the Webquest.

More specifically, students can use the following:

- Specifying a purpose for reading. This strategy is significant because it “enables learners to channel their energy in the right direction” (Oxford, 1990, p. 158)
- Predicting the contents of texts or sections of them and checking their predictions. This process entails active and personal pupils’ involvement in the learning procedure and it can develop their self-confidence (Brewster al., 2003).
- Finding answers to posed questions.
- Connecting text to background knowledge. This strategy is related to the reader’s schemata which is knowledge already kept in memory (Anderson and Pearson, 1988). Students connect what they read with knowledge they already have and they form mental scenarios.
- Guessing the meaning of new words from context and making inferences. Inferencing, which is the necessary mental activity to understand texts, is essential to comprehension. It is imperative teachers should teach pupils how to make guesses and supply the missing information in order to help them become autonomous as readers (Calfoglou, 2004). Through active processes of hypothezing and inferencing, students gain knowledge of language (Donalson, 1978).
• Taking notes and summarizing. Note taking is similar to summarizing since they take information and synthesize it using their own words (Hill and Flynn, 2006). It is a very important strategy for reading and listening and it should focus on understanding and not writing. Summarising can be more challenging than note taking because it often demands greater abridgement of thought (Oxford, 1990).
• Reflecting on what they have learnt from the text. Reflective thinking encourages children’s active learning and develops their higher order thinking processes (Fisher, 1997).

2.3 Affective factors related to Webquests

Furthermore, the researcher attempted to find out the effect of Webquests on motivation, stress and attitude. Motivation is considered to be one of the key elements that influences second language learning in terms of rate and success (Dörnyei, 1998, in Brewster et al., 2002). It concerns students’ choice about actions, insistence and effort invested on them (Oxford and Ehrman, 1993, in Manolopoulou-Sergi, 2004). Motivation is also related to Krashen’s affective filter hypothesis. The affective filter is a “metaphorical barrier that prevents learners from acquiring language even when appropriate input is available” (Lightbown and Spada, 2006, p. 37). As for stress and attitude, because stressed and nervous students are concentrated on tasks and their reactions they will learn less quickly than relaxed ones (MacIntyre, 1995, in Lightbown and Spada, 2006). Having a positive attitude also entails continuous efforts to build on success.

2.4 Benefits of Webquests in language teaching

Webquests use authentic tasks, which prompt learners to “experience the full cycle of motivation from attention to satisfaction” (March, 2004, p. 44). Another important characteristic of Webquests is that they develop students’ thinking skills (March, 1998). The thinking skills that a Webquest may include are comparing, classifying, inducing, deducing, analyzing errors and perspectives, constructing support and abstracting (Marzano, 1992, in Dodge, 1995).

Webquests also facilitate higher level thinking through the questions posed to the pupils. They have to transform information and expertise acquired into something new. They must provide a substantively new idea and not merely a new collection of information (March, 2004). In addition, Webquests use scaffolding to engage learners in higher level thinking (March, 1998). Students get examples with information and opinions on the topics of the Webquests which can help them connect to prior knowledge and build new schema (March, 1998).

Cooperative learning strategies are also promoted in Webquests since pupils learn from one another developing individual expertise on an aspect of a subject (March, 1998). Cooperation enhances learners’ achievement, satisfaction and self-esteem and develops their oral and social skills. Collaborative learning is necessary for helping students in advancing through their zone of proximal development (Vygotsky, 1962, in Warschauer, 1997) too. Webquests also contribute to creating respect for diversity (Jones, 2005) as children produce diverse opinions and form various ways of understanding and knowing.
Moreover, Webquests increase learners’ motivation using specific strategies. One of them is the use of a central, open-ended question. Secondly, pupils develop expertise on a particular aspect of a subject through the individual roles they take on. They are also motivated since they are expected to bring to the group the knowledge they gained (March, 1998).

The Webquest is also a design that promotes participation without disappointment and makes learning available to all learners including them with visual and hearing impairments or learning disabilities (Kelly, 2000). Lastly, Webquests can also serve as alternative assessment, for instance pupils may present their findings in a powerpoint presentation, poster presentation and video or audio tape (Jones, 2005). By publishing their products from a Webquest, they also acquire ownership and become responsible (Jee, 2009).

2.5 Webquests and their characteristics

Bernie Dodge had the idea to integrate the WWW into classroom activities and created the Webquest activity. He defined Webquests as “an inquiry-oriented activity in which some or all of the information that learners interact with comes from resources on the internet, optionally supplemented with videoconferencing” (Dodge, 1995, para. 1). Dodge (1995) distinguished Webquests in two levels, the short term and the longer term Webquest. He also states that Webquests should have at least certain critical attributes.

The first component of a Webquest should be an introduction, which builds on background information and creates a framework. Teclehaimanot and Lamb (2004) also maintain that this component should be interesting, motivating and relevant. The next step is the task that is doable and raises pupils’ interest. For Dodge (2002) the task is the single most important part of a WebQuest and motivates students to go beyond rote comprehension. There are twelve task types; retelling, compilation, mystery, journalistic, design, creative product, consensus building, persuasion, self-knowledge, analytical, judgment and scientific tasks. The task also demands learners synthesize from multiple sources of information, take a position, go beyond the input given and generalize or make a product (Johnson and Zufall, 2004).

Another critical part is the process. It explains the steps students should follow in order to accomplish the task. Resources and guidance, for example questions, timelines, concept maps and links to websites are included (Teclehaimanot and Lamb, 2004). Another building block of Webquests is the evaluation (Dodge, 1997). It describes the criteria learners will be evaluated. The conclusion brings an end to the Webquest reminding pupils what they have learnt and encouraging them to expand their knowledge to other areas. Webquests can also contain other motivational elements by assigning roles to children to play and giving them a scenario to work (Dodge, 1995).

3. Putting theory into practice

3.1 The teaching context

The investigation was carried out in a state primary school in the town of Aliartos. Aliartos is a rural area and is situated in the prefecture of Boiotias between the cities Livadia and Thiva. It was difficult to study the population of all primary school learners of the same age in the
town of Aliartos thus the researcher found it useful to use a sample of pupils. The participants of the study were fifty-five students of fifth and sixth grade, aged eleven to twelve. Twenty-five pupils were male and twenty-nine were female. Fifty learners were also Greek and five were Albanian. They have been learning English for almost three years. Most of them have been attending English language courses at private language institutes or they have been receiving private tuition, too. Their proficiency level was beginner. Each grade was also split in two classes and students in each class were divided into groups of four. The teacher found it helpful for groups to have a mixture of stronger and weaker learners as concerns their language and computer skills. The coursebooks that were used in the current teaching situation were English 5th and 6th Grade proposed by the Pedagogical Institute.

3.2 Research tools

The teacher conducted an action research, which is a systematic inquiry that collects information about learning and teaching (Mills, 2007). The researcher used a combination of quantitative and qualitative methods to increase the validity of the study. Before the implementation of the Webquest the teacher administered a needs analysis questionnaire to all the participating pupils to collect information about the knowledge they already had. After the completion of the Webquest lessons, the teacher gave a post-meant questionnaire to all the students to evaluate whether the purpose of the research was accomplished. Both questionnaires included the same closed-ended questions, which were thirty-six in total. They were also piloted and translated in Greek (App. I).

The tools that contributed to the qualitative analysis of the research were classroom observation checklists and individual semi-structured interviews. During the implementation
of the Webquest lessons while the pupils were working on the Webquest, the teacher observed them using a checklist, which focused on issues of motivation, new literacies, multiple intelligences and reading strategies. In addition, the researcher conducted a series of interviews in a random sample of twenty learners to elicit their opinion, attitude and feelings towards the Webquest lessons. They were asked the same questions in Greek and the teacher took notes while interviewing (App II).

![Image 2](image.png)

### 3.3 The Webquest and its implementation

The researcher decided the topic of the Webquest based on the students’ interests and the needs of the syllabus. The Webquest was called “Healthy food is cool” and was integrated in terms of topic and language. Pupils of both grades had dealt with food, diet and health in the second units of their textbooks. They were also introduced to some computer vocabulary and they had discussed about the uses of the Internet in the first units of their coursebooks. Then, the teacher chose the web resources, designed and wrote the Webquest using the HTML editor Adobe Dreamweaver in a trial form.

The Webquest was completed in about three weeks covering seven teaching sessions of forty minutes each. More particularly the students should be able:

- To use the Internet to practise different reading strategies
- To develop their electronic literacies
- To enhance their multiple intelligences
- To cooperate and produce a report plan
- To improve their computer skills
- To improve their vocabulary on food, diet and health
To become more motivated readers and learners

In the first Webquest session, the pupils were familiarized with some computer skills and the teacher explained them the structure of the Webquest and the function of its features. In the
introduction, the scenario was set up as they were told by inspector food that some of the food they eat is unhealthy and were prepared for the problem they had to solve. They had to decide whether they should stop eating unhealthy food or have a balanced diet. They reflected on what they already know about healthy eating and what they would like to know as well. The aim was to activate their background knowledge and engage them with the topic (image 1).

Next, in the task they had to search in the websites and answer the questions in the relevant worksheets. They would also create a report plan based on the information they had found and present it to their classmates. Two members would be the readers and two the recorders. The aim was to make them motivated about the task (image 2).

As for the process stage, it was separated into six steps. In all these steps, students were guided through hyperlinks to explore specific websites and answer the worksheets. Writing was exercised to some extent by having learners fill in tables and writing their plans of their reports. The aim was to practise note-taking, locating specific information and paying attention to details. Cooperative learning was also enhanced because in all steps children worked in teams. They learnt about different food groups, nutrients, vitamins, the food pyramid and characteristics of a healthy school lunch. They were also given tips on a balanced diet and what food they should eat more and less by playing games and listening to a song. In the fifth step, each group used the notes from the worksheets and wrote a report plan on healthy eating supplementing it with photos from the selected websites. In the last step, they presented their reports to the other groups (image 3).
In the evaluation section, pupils were given guidelines on how they will be evaluated. They became aware of the criteria, which included cooperating, completing the worksheets and report and presenting it to the class. They returned to the KWL activity, discussed and wrote what they learnt about healthy food too. In the conclusion, it was stated that they had accomplished their investigation (images 4, 5)

4. Presentation of the findings

4.1 The Questionnaires

The answers to the two questionnaires were coded and analyzed and a comparison between them was made using SPSS version 19 trial. In both questionnaires, the Pearson Chi-Square test of independence was performed to check whether specific variables were dependent or not. For instance, learners’ want to do Webquests in order to work with their classmates was related to their preference to work in groups. The students’ positive attitude towards doing Webquests again was also connected with their success in learning how to use technology tools through the Webquest.

Furthermore, homogeneity in the answers’ percentages before and after the Webquest lessons was checked through the Mc Nemar non-parametric test of two correlated variables. After analysing the results of the Mc Nemar test, we can see that there was a positive shift in the pupils’ attitude towards Webquests (Table 1).
There was also a positive alteration in students’ motivation and use of technology. The pupils were less stressful (69, 1%), improved their computer skills (92, 7%), cooperated (94, 5%) and explored the topic of food to produce their report (89, 1%) too.

<table>
<thead>
<tr>
<th>Valid</th>
<th>Before the Webquest</th>
<th>After the Webquest</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
<td>Percent</td>
</tr>
<tr>
<td>Yes</td>
<td>35</td>
<td>63.6%</td>
</tr>
<tr>
<td>No</td>
<td>20</td>
<td>36.4%</td>
</tr>
<tr>
<td>Total</td>
<td>55</td>
<td>100%</td>
</tr>
</tbody>
</table>

Table 1

Another important shift was in the learners’ preference about working on the computer (Table 3). The analysis of the results of the Mc Nemar test also reveals statistically important differentiation in certain reading strategies. For more details see Table 4.

<table>
<thead>
<tr>
<th>Boring</th>
<th>Before the Webquest</th>
<th>After the Webquest</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very much</td>
<td>Frequency</td>
<td>Percent</td>
</tr>
<tr>
<td></td>
<td>31</td>
<td>56.4%</td>
</tr>
<tr>
<td>Enough</td>
<td>19</td>
<td>34.5%</td>
</tr>
<tr>
<td>Not so</td>
<td>5</td>
<td>9.1%</td>
</tr>
</tbody>
</table>

Table 3

It is also interesting to note the change in the belief that the Webquest is not at all useful to help students think, analyze and synthesize to a lot. The children changed their belief that the Webquest is not much or enough facilitative to help them use the word processor to a lot as well. Additionally, there was a shift from the belief that the Webquest helped them to follow the steps of the task not much or enough to a lot (cf. Charts, App. IV).
4.2 The observation notes and interviews

As it has been mentioned, the researcher used observation sheets for each class and a number identity was assigned to every learner so that the teacher could tick the appropriate box. During those observations, the researcher noticed that the majority of pupils showed interest about reading English and they generally had a positive attitude towards reading on the Internet. Concerning the stress factor, some of them seemed to be stressed in the first lessons but gradually they felt relaxed. They also appeared to be able to use the links to locate data but they displayed some difficulty in selecting, analysing and synthesizing information.

As regards computer skills, they found easy to use the word processor, the mouse and the keyboard. They also liked playing interactive games on healthy food, learning through images, video and listening to a song. A point, which was also confirmed by the questionnaires, was that they seemed to be able to think on their own and have their role. The observation checklist also pointed that most of them worked with their groups sharing knowledge and asking each other’s help. However, some of them denoted opposition towards working in groups. Finally, several of students tended to use a number of reading strategies, such as identifying the purpose of reading, answering posed questions and reflecting on what they learnt.

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The researcher also conducted individual interviews. Based on the learners’ responses all of them stated that they liked the Webquest. They liked best the food topic, writing on the computer, being with their friends and playing games. They also commented on the fact that they learnt more about healthy food and improved their computer skills. Pupils’ interviews also disclosed that generally they found the Webquest activity easy. Some of them admitted that they found certain parts difficult, for instance synthesising the information yet they showed their willingness towards the use of Webquests again. They felt free to express that they were anxious at first but their affective filter lowered during the Webquest. The majority of them also stated that they cooperated well and everyone had their role. Furthermore, according to the learners’ interviews, previous exposure to relevant knowledge, the websites, the media literacies, their classmates’ cooperation and the teacher’s feedback helped them to solve the mystery and complete the Webquest (App. III).

5. Discussion and pedagogical implications

A discussion in relationship to the research questions and the theoretical framework and the teaching implications follow. Concerning the first research question, there is statistical support that the students identified the food problem, read the web pages and located information about healthy diet using the links. The interviews and pupils’ report plans also show that they gathered valuable data from the various sites. Moreover, they analyzed the information and synthesized newly acquired knowledge into group reports. It appears from the classroom observations that the students seemed to be able to make the appropriate selections, evaluate the information and synthesized it into new content. The thinking levels of analysis, synthesis and evaluation based on Bloom’s taxonomy were encouraged. The results suggest that the Webquest as a tool of instruction developed the pupils’ new literacies. Through the engagement in higher level thinking such as synthesis, which is important and necessary during the problem solving process otherwise effectiveness decreases (Huit, 1992, in Huit, 2009), learners also become active thinkers and readers.

Regarding the second research question, there is evidence that most of the intelligences and reading strategies were developed. More particularly, the students managed to read the websites and take notes in the worksheets. They also discussed their findings and produced a report plan. They were successful in using the mouse, the keyboard and the word processor to write, copy, paste and store information as the classroom observations indicated too. Furthermore, the logical-mathematical intelligence was promoted since the learners were involved in a problem-solving scenario in the introduction of the Webquest. There is statistical evidence that they were able to think, analyze and synthesize to create a report.

Their visual-spatial intelligence was also enhanced as they were exposed to images, visuals and video during the Webquest and managed to choose pictures for their reports. Additionally, there is observational and statistical evidence that the pupils worked with their team, exchanged information and cooperated to solve the mystery of Inspector Food. They also learnt through their teacher and classmates’ feedback and they were helped to make their own thinking connections between what they read on the internet and the real world. Musical intelligence was incorporated in the Webquest as the children were given the opportunity to listen to a song on the relevant topic as well.
The results of the study have also provided evidence that the students found most easy to practise prediction, connect what they read with previous knowledge, summarise information and reflect on what has been learnt on the evaluation and the conclusion of the Webquest. There is also statistical support that they managed to identify the purpose for reading the web pages, check predictions made, find answers to the worksheets, make inferences and guess the meaning of unknown words.

In other words, the Webquest can be a tool for differentiation as Schweizer and Kossow (2007) have proposed. It can help learners read on the internet, see the written form of words and write them themselves. Especially primary school children, who have short attention span and their short and long memory is improving, learn more quickly and better. They also practise their critical thinking skills and thus they start becoming self-assured and more autonomous. Using the keyboard, they learn the dictation of words as well.

Moreover, the Webquest is helpful for learners in understanding texts on the internet and guess unknown words by means of pictures and videos. By listening to a song on the internet, they practise their pronunciation abilities too. Since an attribute of primary students is that their social awareness is developing it is also implied that the Webquest teaches them consideration of others and empathy. Self-confidence is also acquired as the learners make their own thinking connections and consequently they participate in the learning process with less stress.

In relation to the third research question, there is statistical evidence that their motivation has been increased, their stress level has been lowered and their attitude has been improved. It must be pointed out that the use of computer skills, the exploration of the interesting topic of food and the employment of specific reading strategies and literacies played an important role to the above affective factors. Learning how to use technology tools together with the input from the Web pages including photos and the help the students received to make their own thinking connections have been proven very helpful too.

The fact that the pupils acquire more motivation helps them to be more involved in the learning and develop their reading strategies while reading on the Internet. Most learners with adequate motivation can gain a working knowledge of a foreign language (Dörnyei, 2001). In addition, the input provided to the students through the links to the websites is of major importance for both motivation and stress. It is educationally more informative to know what a child can do with some little help than to know what he attains unassisted (Donalson, 1978). As primary school learners are creative, curious and imaginative by their nature, their discovery and exploration skills are promoted too. A non-stressed environment also creates a feeling of safety to them as they learn in a more comfortable atmosphere without getting anxious. Low anxiety is a pre-condition for more productive language acquisition (Krashen, 1982, in Bouniol, 2004). The students also learn quickly, boost their self-esteem and become more confident.

6. Limitations of the study and suggestions for future research

The first limitation relates to the number of the participants. The research was a small-scale one so it cannot be widely applicable to the whole number of fifth and sixth grade children of
primary education. A larger sample could offer more valid, generalized results. The second limitation derives from the short time duration of the research since seven teaching sessions seem to be rather limited. The teacher could have designed a syllabus with Webquests covering a variety of topics parallel to the coursebook, lasting for a whole teaching year and meeting children’s interests and intelligences.

Another limitation was the lack of time. The teacher could have evaluated the pupils’ worksheets and reports, give feedback to their writings and encourage group correction. Another predicament concerns technology. There was an Internet failure and the computers were placed in a linear order causing to the groups some difficulties. As a result, one group did not manage to cooperate successfully and another did not manage to complete all the worksheets and the final report in the process stage. Learners could have their own computers and the teacher could have found Internet sites that can be stored.

Based on the findings of this study some recommendations for further research can be made. Pupils of every class could read the group reports again, discuss, compare, analyze them and synthesize a common report with the teacher’s scaffolding. She should be a counselor, advisor and facilitator. She could also add the reports of the classes on the Webquest as a component. Then each class could read the reports of the rest of the classes on the Webquest, critically evaluate them and comment on them stating if they agree or disagree. Additionally, it would be interesting to research the use of Webquests in self-access at home or the use of Webquests combined with the application of blogs or wikis. Students could be motivated to work at home or publish their projects on individual or class blogs and wikis.

7. Concluding remarks

The aim of this article has been to explore the power of a Webquest on EFL state primary school pupils of fifth and sixth grade. The researcher has attempted to provide useful insights regarding the designing and implementation of a Webquest. She studied the effects of Webquest on the learners’ acquisition of new literacies and high order thinking skills and on the development of intelligences and reading strategies. The positive effects of the Webquest on the students’ motivation, stress and attitude towards reading in English were also discussed. Since the researcher was the teacher of the classes as well, it has been concluded that the integration of new technologies boosts foreign language education as children are exposed to new sources of information and novel modes of learning. Webquests can also help teachers add variety in their work and foster their professional development.

References


Appendix I

Needs analysis questionnaire on Webquests

Dear students,
This questionnaire is part of a research and will help me to collect information about what you already know. The questionnaire is anonymous and there are no right or wrong answers.

A. Have you ever done webquests?
   (circle 😊 = yes / 😕 = no)
   a. 😊                  b. 😕

B. Why would you like to do webquests? (circle 😊 = yes / 😕 = no)
   You would like to do webquests
   1. to become more motivated in learning English 😊😊😊
   2. to become less stressful in learning English 😊😊😊
   3. to improve your computer skills 😊😊😊
   4. to learn how to use technology tools 😊😊😊
   5. to work with your classmates to solve a mystery 😊😊😊
   6. to explore interesting topics with the aim of producing projects 😊😊😊

C. How would you like working upon different activities? (tick one for each answer)

<table>
<thead>
<tr>
<th></th>
<th>Very much</th>
<th>enough</th>
<th>Not so</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. on the computer</td>
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<tr>
<td>b. with your group</td>
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<td>c. having your role</td>
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</table>

D. Which reading strategy do you find easy to use? (circle 😊 = yes / 😕 = no)
   1. identifying a purpose for reading 😊😊😊
   2. predicting 😊😊😊
   3. checking your predictions 😊😊😊
   4. finding answers to posed questions 😊😊😊
   5. connecting text to background knowledge 😊😊😊
   6. summarising 😊😊😊
   7. making inferences 😊😊😊
8. guessing the meaning of new words from context
9. reflecting on what has been learnt from the text

E. Which media literacies are more important to you?
(rate the following from 1=the most to 4= the least)
   a. video_______
b. sound_______
c. texts_______
d. video, sound and texts________

F. New Literacies and Multiple Intelligences (circle one out of four)
(1=not at all, 2=not much, 3=enough, 4=a lot)
Do you believe that learning English through webquests would help you ...
1. to read the web pages and take notes? 1 2 3 4
2. to locate information using the links from the internet? 1 2 3 4
3. to select valuable information from the sites given by the teacher? 1 2 3 4
4. to think, analyze and synthesize information to produce texts? 1 2 3 4
5. to use the word processor to write, copy, paste, store or delete texts? 1 2 3 4
6. to select artwork and photos for your project? 1 2 3 4
7. to use the mouse and the keyboard and play roles? 1 2 3 4
8. to learn through images, video, sound and playing games? 1 2 3 4
9. to cooperate with your classmates and share information? 1 2 3 4
10. to make your own thinking connections? 1 2 3 4
11. to learn through your teacher’s and classmates’ feedback? 1 2 3 4
12. to follow the steps of a webquest task? 1 2 3 4
13. to feel satisfied and happy from your performance on the webquest activity?

Thank you very much for completing the questionnaire!
Post-meant questionnaire on Webquests

Dear students,
This questionnaire is part of a research and will help me to find out what you have learnt. The questionnaire is anonymous and there are no right or wrong answers.

A. Would you like to do webquests again?
(circle 😊 = yes / 😞 = no)

a. 😊 b. 😞

B. While working with the webquest, you finally managed. ..( circle 😊 = yes / 😞 = no)
1. to become more motivated in learning English
2. to become less stressful in learning English
3. to improve your computer skills
4. to learn how to use technology tools
5. to work with your classmates to solve a mystery
6. to explore interesting topics with the aim of producing projects

C. How did you like working upon different activities? (tick one for each answer)

<table>
<thead>
<tr>
<th></th>
<th>Very much</th>
<th>enough</th>
<th>Not so</th>
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<tbody>
<tr>
<td>a. on the computer</td>
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<td>b. with your group</td>
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<td>c. having your role</td>
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D. Which reading strategy did you find easy to use through the webquest and to what extent did you develop it?( circle 😊 = yes / 😞 = no, if yes: circle one out of three) (1=not much, 2=enough, 3=a lot)
1. identifying a purpose for reading
2. predicting
3. checking your predictions
4. finding answers to posed questions

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5. connecting text to background knowledge

6. summarising

7. making inferences

8. guessing the meaning of new words from context

9. reflecting on what has been learnt from the text

E. Which media literacies were more important to you?
(rate the following from 1=the most to 4=the least)

a. video
b. sound
c. texts
d. video, sound and texts

F. New Literacies and Multiple Intelligences (circle one out of four)
(1=not at all, 2=not much, 3=enough, 4=a lot)

Do you believe that learning English through webquests finally helped you ...
1. to read the web pages and take notes?
2. to locate information using the links from the internet?
3. to select valuable information from the sites given by the teacher?
4. to think, analyze and synthesize information to produce texts?
5. to use the word processor to write, copy, paste, store or delete texts?
6. to select artwork and photos for your project?
7. to use the mouse and the keyboard and play roles?
8. to learn through images, video, sound and playing games?
9. to cooperate with your classmates and share information?
10. to make your own thinking connections?
11. to learn through your teacher’s and classmates’ feedback?
12. to follow the steps of a webquest task?
13. to feel satisfied and happy from your performance on the webquest activity?

Thank you very much for completing the questionnaire!
### Appendix II
Classroom observation checklist

<table>
<thead>
<tr>
<th>Motivation</th>
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<td>Students using the webquest</td>
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<td><strong>New Literacies and Multiple Intelligences</strong></td>
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<td>use the mouse/keyboard and play games</td>
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<td>work with the group and share knowledge</td>
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<td>be able to think on their own and</td>
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### Interview Questions

1. Did you like the webquest? What did you like the most/least?
2. What part of the webquest did you find easy? Why?
3. What part of the webquest did you find difficult? Why?
4. Did you like the part being easy/difficult? Why?
5. Did you cooperate with your classmates to complete the task? Were they willing to do so?
6. Did you get the help of the teacher to complete the task? Why?
7. Were the web pages given to you helpful or not?
8. Were the media literacies (video, sound) helpful or not? In what ways?
9. How did you feel before starting the webquest?
10. How did you feel while doing the webquest?
11. How easy/difficult was it to synthesize the information?
12. What helped you to solve the mystery?
13. Would you like to do webquests in the English lesson again?
14. What do you think you learned?

### Ερωτήσεις Συνέντευξης

1. Σου άρεσε η ιστοεξερεύνηση; Τι σου άρεσε περισσότερο/λιγότερο;
2. Ποιο κομμάτι της ιστοεξερεύνησης βρήκες εύκολο; Γιατί;
3. Ποιο κομμάτι της ιστοεξερεύνησης βρήκες δύσκολο; Γιατί;
4. Σου άρεσε το κομμάτι που ήταν εύκολο/ δύσκολο; Γιατί;
5. Συνεργάστηκες με τους συμμαθητές σου για να κάνεις τη δραστηριότητα; Ήταν πρόθυμοι να συνεργαστούν;
6. Σε βοήθησε η δασκάλα σου στη δραστηριότητα; Γιατί;
7. Οι ιστοσελίδες που σου δόθηκαν σε βοήθησαν ή όχι;
8. Τα στοιχεία της τεχνολογίας (βίντεο, ήχος) σε βοήθησαν ή όχι; Αν ναι, με ποιους τρόπους;
9. Πώς αισθάνοντας πριν αρχίσεις την ιστοεξερεύνηση;
10. Πώς αισθάνοντας κατά τη διάρκεια της ιστοεξερεύνησης;
11. Όλα εύκολο/ δύσκολο ήταν να συνθέσεις τις πληροφορίες;
12. Τι σου βοήθησε να λύσεις το μυστήριο;
13. Θα ήθελες να κάνεις ιστοεξερευνήσεις στο μάθημα των αγγλικών ξανά;
14. Τι νομίζεις ότι έμαθες;

Appendix III
Samples of learners’ answers to the interview questions

1. Σου άρεσε η ιστοεξερεύνηση; Τι σου άρεσε περισσότερο/λιγότερο;
   o Ναι πολύ έμαθα πολλά πράγματα
   o Μου άρεσε που γράφαμε και είχε σχέση με τα φαγητά
   o Πάρα πολύ και ελπίζω να ξανακάνουμε
   o Περισσότερο που ήμουν με τους φίλους μου και τα παιχνίδια και λιγότερο τα συμπεράσματα
   o Μου άρεσε που κάναμε μια ομαδική δραστηριότητα
   o Δε μου άρεσε κάτι λίγο όλα μ’αρέσανε
   o Μου άρεσε που γράφαμε γιατί βελτίωσα τις ικανότητές μου στους υπολογιστές
2. Ποιο κομμάτι της ιστοεξερεύνησης βρήκες εύκολο; Γιατί;
   o Όλα εύκολα ήταν δε με δυσκόλεψε κάτι
   o Όλες εύκολες ήταν δύσκολο αν ήξερες τις λέξεις ήταν εύκολο
   o Το worksheet 4 ήταν πράγματα που τα ξέρα
   o Που γράφαμε
   o Το worksheet 2
3. Ποιο κομμάτι της ιστοεξερεύνησης βρήκες δύσκολο; Γιατί;
   o Το report
   o Το worksheet 1 έπρεπε να γράψουμε πάρα πολλά
   o Κανένα
   o Το τελευταίο γιατί έπρεπε να αναζητήσουμε όλα τα worksheets
4. Σου άρεσε το κομμάτι που ήταν εύκολο/ δύσκολο; Γιατί;
   o Ναι γιατί δεν ήταν μια χαζομάρα ήταν για τα υγιεινά φαγητά
   o Έτσι και έτσι γιατί έπρεπε να γράψουμε πολλά
   o Μου άρεσε ναι
5. Συνεργάστηκας με τους συμμαθητές σου για να κάνεις τη δραστηριότητα; Ήταν πρόθυμοι να συνεργαστούν;
   o Ναι πολύ ο καθένας είχε το ρόλο του
   o Ναι αιμέ
   o Ναι ήταν πρόθυμοι

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6. Σε βοήθησε η δασκάλα σου στη δραστηριότητα; Γιατί;
   Ο κάποις λέξεις που δεν ξέραμε
   Οι για κάτι που δεν καταλάβαινα
   Να μάθω να αντιγράψω
   Να κάποιος λέξεις που δεν ξέρα"με

7. Οι ιστοσελίδες που σε δόθηκαν σε βοήθησαν ή όχι;
   Με βοήθησαν για να απαντήσω στις ερωτήσεις
   Με βοήθησαν για λέξεις που δεν ήξερα
   Πάρα πολύ είχαν πολλά χρήσιμα πράγματα
   Να αρκετά

8. Τα στοιχεία της τεχνολογίας (βίντεο, ήχος) σε βοήθησαν ή όχι; Αν ναι, με ποιους τρόπους;
   Πολύ γιατί μαθαίναμε περισσότερα αγγλικά
   Να μάθω αγγλικά
   Να μάθω διάφορα για την εργασία που κάναμε
   Να πάρα πολύ

9. Πώς αισθάνθηκες πριν αρχίσεις την ιστοεξερεύνηση;
   Είχα λίγο άγχος πως θα ήταν
   Καλά γιατί θα μαθαίναμε περισσότερα αγγλικά
   Λίγο αγχωμένος γιατί δεν ήξερα πως θα ήταν
   Χαλαρή δεν είχα άγχος
   Χαρούμενη επειδή θα ερμότασαν στους υπολογιστές

10. Πώς αισθάνθηκες κατά τη διάρκεια της ιστοεξερεύνησης;
    Πάρα πολύ καλά γιατί ουάντατο που είχαμε ετοιμασεί
    Χαρούμενος γιατί μπόρεσα να μάθω τι πρέπει να τρώμε και τι δεν πρέπει
    Μου άρεσε πολύ και κατάλαβα ότι δεν ήταν δύσκολο
    Χαρούμενη γιατί άρεσε και σε μένα και στα παιδιά που συνεργασίσαμε

11. Πόσο εύκολο/ δύσκολο ήταν να συνθέσεις τις πληροφορίες;
    Εύκολο ήταν δεν ήταν κάτι δύσκολο
    Δεν ήταν και πάρα πολύ δύσκολο
    ήταν εύκολο γιατί μερικά τα έξεραμε και δύσκολο γιατί έπρεπε να γυρνάμε στα sites

12. Τι σε βοήθησε να λύσεις το μυστήριο;
    Που ασχολούμασταν στο μάθημα μ’ αυτά τα πράγματα
    Οι ιστοσελίδες και μερικά που ήξερα
    Επειδή είχαμε καλή συνεργασία
    Οι συμμαθητές μου
    Τα Κέιμενα

13. Θα ήθελες να κάνεις ιστοεξερευνήσεις στο μάθημα των αγγλικών ξανά;
    Ναι θα ήθελα γιατί μου άρεσε
    Ναι θα ήθελα
    Να ήταν ευχαριστώς

14. Τι νομίζεις ότι ύμαθες;
    Έμαθα πολλά για το υγιεινό φαγητό
    Για τα food groups, τα nutrients και για τις βιταμίνες
    Πώς να προσέχω τον οργανισμό μου
    Για το τι πρέπει να τρώω που δεν ήξερα
- Πώς να γράφω στον υπολογιστή
- Και αγγλικά και πολλά πράγματα που δεν ήξερα
- Να διαβάζω από τον υπολογιστή
- Πώς να μπαίνουμε στο internet
- Να μάθω ιστοεξερεύνηση που δεν ήξερα

Appendix IV

![Graph 1](image1.png)

![Graph 2](image2.png)

![Graph 3](image3.png)
Christine Popota (xpopota@yahoo.com) holds a BA in English Language and Literature from Aristotle University and a M.ed in TESOL from Hellenic Open University. She has been a state EFL teacher since 2003 and an oral KPG examiner for the last 5 years.
Promoting motivation and autonomy through Webquest implementation in Junior High school EFL context

Eleftheria KOUTSOGIANNI

This paper 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 ultimate purpose of this experiment was to demonstrate the impact that the Webquest application had on the promotion of motivation and autonomy throughout the learning process. In particular, the enhancement of intrinsic motivation, in other words learners’ individual interest and positive disposition towards the target language, was pursued by applying the Webquest design to specific reading focused sessions. Moreover, learners’ autonomy in handling and acquiring knowledge with the aid of WebQuest technology was under the scope of the following investigation. Eventually, the research results proved that the integration of Webquest application into the curriculum can affect substantially learners’ motivation and self-directed learning.

Η εργασία αυτή παρουσιάζει τα αποτελέσματα της πειραματικής εφαρμογής μιας σειράς μαθημάτων με τη βοήθεια της ιστοεξερεύνησης στο πλαίσιο της διδασκαλίας της Αγγλικής γλώσσας ως ένας πραγματοποιηθείσα σε ένα ελληνικό δημόσιο Γυμνάσιο. Ο απώτερος σκοπός του πειράματος ήταν να καταδειχθεί η επιδράση που έχει η ιστοεξερεύνηση στην προαγωγή των κινήτρων και της αυτονόμησης κατά τη διάρκεια της μαθησιακής διαδικασίας. Συγκεκριμένα, η ενίσχυση της εσωτερικής παρώθησης, με άλλα λόγια το ατομικό ενδιαφέρον των μαθητών και η δετική τους προδιάθεση απέναντι στη γλώσσα στόχο, επιδιώκηται με την εφαρμογή της ιστοεξερεύνησης σε συγκεκριμένα μαθήματα, εστιασμένα στην κατανόηση κειμένου. Επιπλέον, η αυτονόμηση των μαθητών στη διαχείριση και την απόκτηση της γνώσης με τη βοήθεια της τεχνολογίας της ιστοεξερεύνησης ήταν στη σκοπιά της ακόλουθης διερεύνησης. Τελικά, τα αποτελέσματα της έρευνας απέδειξαν ότι η ενσωμάτωση της εφαρμογής της ιστοεξερεύνησης στο αναλυτικό πρόγραμμα μπορεί να επηρεάσει ουσιαστικά την κινητοποίηση των μαθητών και την αυτοκατευθυνόμενη μάθηση.
Key words: reading skills and strategies, new literacies, educational technology, autonomy, motivation, Internet, WebQuest

1. Introduction

The advent of technology in the classroom has reformed the way that learners access and process information in order to achieve learning goals, generating thus new implications for the educational methodology. Especially, in the foreign language classroom learners are striving to become literate dealing with a load of information. This process dictates a creative adaptation of the learning practices to the new demands.

Particular past dissertations conducted in Greek public schools by HOU students (see Popota, 2011; Gkoritsa, 2011; Manou, 2012) studied the implementation of Educational Technology and the promotion of Information Computer and Technology (ICT) skills in education. All investigate the influence of the new literacies, reading on the Web and the Webquest on the teaching context of primary school. The analysis of the findings of the aforementioned researches supported the hypothesis that new literacies, reading skills and strategies and higher order thinking skills are promoted by Webquests and web-based reading. Taking this as an incentive, the writer of the present paper was triggered by the need to elaborate and focus on the perspectives of the WebQuest motivational power and the promotion of readers’ autonomy in the context of state Junior High school.

The Webquests motivational power and the fostering of learners’ autonomy were investigated by means of an experiment that lasted six sessions and involved thirty students of the second grade of a Junior High school. The results of the research testify to the hypothesis of the previous researches that Webquest reading promotes new literacies and reading strategies in general and go further in order to prove how this fact can be exploited for the enhancement of learners’ motivation and autonomy.

The research tools that were employed, namely questionnaires, interviews and observations facilitated the quantitative as well as the qualitative analysis of the collected data and are presented in section three. Learners’ attitudes towards Webquest as a teaching tool were evaluated by means of the two questionnaires, the first delivered before the Webquest sessions and the second after the actual conduction of the Webquest lessons. The data were statistically analysed and compared in order to demonstrate a considerable shift that is described in detail in the fourth section. The evaluation of the findings follows in section five. In order to support the practices followed and the conclusions made, the theoretical basis developed in the second section was an indispensable part of this paper.

2. The theoretical Background of the research

2.1 New literacies and reading skill

As mentioned earlier, the purpose of the experiment was to shed light on the influence of particular new technologies on reading instruction. According to modern approaches on reading instruction, readers should “rely on both text-driven and knowledge-driven
processes” (Goldman and Rakestraw, 2000:311), in other words effective processing of meaning should blend “lower-level” or “text-driven” processes with “higher level” (representing comprehension processes that make much more use of the reader’s background knowledge and inferencing skills’) or “knowledge-driven” ones (Calfoglu 2004:85).

Especially in our times, the notion of literacy is undergoing major reconsiderations as it is randomly reshaping with the spread of online communication. As Bolter (1991) claims, it is highly likely that most reading will take place on computers in the future. Therefore, the new demand imposed on education is to build on foundational literacies (which include, for instance, phonemic awareness, word recognition, decoding, vocabulary knowledge, comprehension, inferential reasoning and spelling) in order to instruct new literacies. More specifically the emergence of electronic literacy through thoughtfully designed teaching methods can be applied quite effectively to EFL context objectives.

The electronic literacy approach, as it is expressed by Shetzer and Warschauer (2000:2) “assumes that there is not just one literacy, but many kinds of literacy, depending on context, purpose and medium”. Additionally, Warschauer (1999 & 2003, in Kern, Ware & Warschauer, 2008), draws on ethnographic case studies of post-secondary writing instruction and pushes for a more integrated, nuanced conception of electronic literacy. He elaborates the plural construct of ‘electronic literacies’, including ‘computer literacy’, ‘information literacy’, ‘multimedia literacy’, and ‘computer mediated literacy’ to investigate the relationship between the sociocultural contexts of networked classrooms and the particular ways that literacy is valued and practiced by teachers, learners, and members of the larger society. To sum up, this multi-dimensional character of literacy has to be taken under consideration, when designing activities that entail on-line reading or writing. The development of new literacies in EFL context, may be facilitated by the fact that the majority of learners from an early age have developed electronic literacy skills in their own languages. The challenge is now for the language teacher to transfer these skills to the foreign language in the most beneficial way so that learners can autonomously achieve their learning goals.

### 2.2 Readers’ motivation and autonomy enhanced by Webquest design

#### 2.2.1 WebQuest characteristics

Before exploring the ways that WebQuest activities can ensure motivation and autonomy while learning English, it is advisable to acquire a complete picture of this method and its components. A WebQuest is “an inquiry-oriented activity in which some or all of the information that learners interact with comes from resources on the internet, optionally supplemented with videoconferencing” (Dodge, 1997:1). In particular Dodge’s WebQuest presupposes the existence of the following parts which constitute critical attributes of it, namely an ‘introduction’, a ‘task’, a ‘set of information sources’, a ‘process’, some ‘guidance’ on how to organize the information acquired, the ‘evaluation’ part and a ‘conclusion’. The ‘introduction’ sets the stage and provides some background information. The ‘task’ is the most important part as it describes what the learner will have done at conclusion. Dodge (2002:1) adds that “a well designed task is doable and engaging, and elicits thinking in learners that goes beyond rote comprehension”. The ‘process’ is a description of what is required to accomplish the task and is founded on scaffolding technique. The process part includes the ‘resources’ that most of the times are links with lists of web pages, web
documents, searchable databases or books and magazines. Some guidance on how to organize the information is also provided here. The ‘evaluation’ part describes how learners’ performance will be evaluated, defines the criteria, and also specifies if the evaluation will be for individual, group or both. Finally the ‘conclusion’ brings a closure to the quest, reminds learners of what has been learnt and in some cases may include rhetorical questions or extra links to encourage students to expand their quest.

2.2.2 Webquests attributes and readers’ motivation

Focusing on readers’ motivation, the speculation of Webquest potentials concludes to the following. According to contemporary motivation theory, teachers should aim at raising learners’ intrinsic motivation²:

“At least with a great number of learners, the use of the Internet in the language education fills the criterion of promoting intrinsic motivation as they see it as a modern and useful tool that enables them to be connected with the world” (Vlachos, 2006:3).

Moreover, open-ended questions, a very powerful technique that WebQuests employ, apart from activating learners’ prior knowledge instigate their individual curiosity and ensure their active involvement in every step of the WebQuest process. As Brooks & Brooks (1999:9, cited in March, 2003/2004:44) support “a teacher can challenge students by posing contradictions, presenting new information, asking questions, encouraging research, and engaging students in inquiries designed to challenge current concepts”.

Authenticity and relevance of tasks used by Webquests also have a motivational impact on readers. Taking into consideration John Kellers’ ARCS³ Model of Motivational Design (Keller 1983,1987), March (2003/2004) comments that ‘the best way to address attention and relevance is to choose a topic that students find compelling and then create an authentic learning task related to it’. The collaborative element that WebQuests promote by suggesting group work can also be added to the motivational energy that WebQuests reflect. A successful cooperative learning environment, exhibiting according to Johnson and Johnson (2000) ‘positive interdependence’, ‘promotive interaction’, ‘individual and group accountability’, ‘interpersonal and small group skills’ and ‘group processing’, has the potential to prompt even the more hesitant and less self-confident learners.

In addition, Webquests provide ample multimedia resources (video, sound, pictures and graphics, animation etc.) that may respond to all type of intelligences (i.e., linguistic, logical mathematical, bodily kinesthetic, spatial, intrapersonal, interpersonal, musical, naturalist and existential), according to Gardner’s theory of Multiple Intelligences. Thus, the motivating potential of WebQuest is raised even more. Last but not least, the fact that many WebQuests suggest the publishing of the final product- at a Website, wiki, blog etc., enhances learners’ willingness and makes reading a purposeful activity. As Warschauer and Meskill (2000) suggest, the publishing of students’ own work on the World Wide Web, enables writing for a real audience.

2.2.3 WebQuest attributes and readers’ autonomy
WebQuest design demonstrates crucial features that have the potential to foster readers’ autonomy and enable them to acquire life-long learning as ‘flexible, autonomous life-long learning is essential to success in the age of information’ (Reich, 1991; Rifkin, 1995). The problem solving and open-ended questions techniques operate towards activating readers’ critical thinking by analyzing, evaluating and synthesizing information from the suggested Web resources. In fact as Coiro (2003) claims, the nature of information on the Internet suggests new interpretations of these processes, which demand all readers to adopt a more critical stance towards texts. It has to be admitted that by developing electronic literacy skills, readers gradually gain initiatives and independence in selecting and applying.

Moreover, WebQuests include those desirable teaching methods that support students’ exposure to experts’ strategies by coaching, providing scaffolding, and then fading — gradually handing over control of the learning process. Through these methods learners gain control over learning and master the management of cognitive and metacognitive strategies so as to become autonomous. Metacognitive strategies are mostly associated with the development of autonomy. As O’Malley and Chamot’s (1990:138) list suggests, strategies such as “planning, directed attention, selective attention, self management and self monitoring, problem identification and self evaluation” are exercised through WebQuest activities enabling learners to direct the process of learning.

3. The research hypothesis and design

3.1 Research methods and research questions

The research sample was consisted of thirty students belonging to the second grade of the fourth Junior high school in Tripolis, a sample size that “is held by many to be the minimum number of cases if researchers plan to use some form of statistical analysis on their data” (Cohen, Manion and Morrison, 2000:93).

The kind of research method that was employed for the needs of the present experiment is the so called ‘action research’. Action research contributes to a science of education and frequently uses case study (Hult & Lennung, 1980, McKernan, 1991). The case study was considered applicable here “as it is appropriate for individual researchers because it gives an opportunity for one aspect of a problem to be studied in some depth within a limited time scale” (Bell, 1999:10). The research questions were oriented towards investigating:

- Which are High school learners’ self-perceptions about new literacies and how is their reading skills affected by using WebQuest application?
- What is the influence of WebQuest lessons on adolescent learners’ motivation?
- How can reading strategies adopted by WebQuests promote readers autonomy?

3.2 Data collection instruments

In order to accumulate the data needed, the researcher designed questionnaires, observation checklists and interviews. As far as the questionnaires are concerned, in their majority the items were presented in the form of rating scales and more specifically, the Likert scale, “which provides a range of responses to a given question or statement” (Cohen, Manion & Morrison, 2000:253), was applied. Before applying the questionnaire, the researcher conducted the process of pilot-testing. The teacher of the class and her students read the questionnaires and spotted the problematic points. This trial process, allowed the
researcher to collect feedback in order to make alterations and fine-tune the final version of the questionnaire (Dornyei, 2003).

The first questionnaire was a needs analysis one (analysis of information about learners’ already obtained knowledge and what they need to know so that the gap can be bridged by the curriculum – Graves, 2000, cited in Graves, 2008) and was typically administered before the WebQuest sessions. The aim was to investigate learners’ needs and opinions, estimate their ICT skills and collect quantitative data concerning their perceptions about the impact that WebQuest instruction may have on motivation and autonomy through reading. After the completion of the WebQuest sessions, readers were provided with an evaluation questionnaire, which intended to measure the potential shift by correlating the counterpart data of the two questionnaires and analyze them using statistical tools. In particular the Statistical Package in Social Sciences (SPSS v.18) was used for the processing of the data. Qui-square and the McNemar tests were applied in order to estimate the statistical difference.

Apart from the questionnaire, the observation checklist and the interview were used in order to allow for a variety of data collection tools and methods as well as perspectives of different participants in the research context. Therefore, the data could be ‘triangulated’ with the use of qualitative items as well. For the purposes of the observation, an observation checklist was constructed adopting the ‘structured observation’ pattern’ (Cohen, Manion & Morrison, 2000). It is also worth mentioning that the observations enabled the researcher to gather valuable data on the interactional and programme setting (Morrison, 1993). The observation checklist took the form of horizontal and vertical columns. In the horizontal columns we find the description of observable particular attitudes concerning the three areas under investigation, namely ‘new literacies and reading on the Web’, ‘motivation throughout the WebQuest activities’ and ‘promoting reading autonomy’. In the vertical columns there are the numbers corresponding to a particular student. The teacher observed the learners during every session of the WebQuest and ticked the appropriate box.

Interview is the data collection instrument that was used after the completion of the WebQuest teaching sessions. The purposes for employing the interview method is that it has direct bearing on the research objectives, it may be used to test hypotheses or to suggest new ones and it may be used in conjunction with other methods (Cohen, Manion and Morisson, 2000). Because of the impotence of the researcher to apply the experiment on her class, the actual WebQuest sessions were conducted with the cooperation of the officially appointed teacher. As a result, two kinds of interviews were delivered; the first was addressed to the students and the second to the teacher of the class. The type of interview used belongs to the category that Patton (1980) defines as interview guide approach, according to which the exact wording and sequence of questions are determined in advance and all the interviewees are asked the same basic questions in the same order.

3.3 Description of the WebQuest procedure and the teaching objectives

The particular WebQuest was designed taking under consideration particular specifications. First of all, the ‘Lost cities’ Webquest thematic area was relevant to the topic of the second unit of the official coursebook, that the class had recently completed, entitled ‘Echoes of the Past’. As a result, students had acquired some prior knowledge, content schemata relevant to the theme of their electronic quest and were expected to consider WebQuest as a naturally integrated part in their lessons and curriculum, and not as an add-on process.
The whole process lasted six sessions and pertains to the long-term quest category. It was designed and presented as a Power point presentation with embedded hyper-links. Students, right away from the introduction were faced with problem-solving situations. Hyper-links in every Webquest part triggered learners to discover the answers to the posed questions. At the task part learners were overtly put into the scenario and assumed roles. According to the scenario they had to prepare an advertising presentation for an agency website which would be presented as the final product in the school webpage. During the process part students were asked to keep working in their groups but taking on separate responsibilities, reading different Web pages or the same Web pages but from different perspectives. In the evaluation part, students were supplied with the list of criteria on which their work would be evaluated. This way they knew from the start how they should work to improve the quality of their job.

4. Presentation of the findings

Pertaining to the research questions already presented, the data collected by means of the needs analysis and evaluation questionnaires lead to the following findings. In relation to learners general attitudes towards literacy skills, the data revealed that oracy skills are considered more important than literacy ones. Inquiring about the means used for teaching reading, although the coursebook is used mostly, the percentages indicate that it is the less preferable teaching material. Learners’ perceptions on the necessity of ICT skills in teaching EFL show that they highly value the necessity of these skills for communicating in English, as illustrated in Graph 1.

![Graph 1](image)

In relation to the findings concerning learners’ aptitude in new literacy skills, the data illustrate the following results. Among a list of fifteen skills, learners seem to handle with considerable ease the skills referred as ‘location and choice of a search engine’, the ‘recognition of commercial links’, ‘the identification of various Websites’, ‘the skimming of the text to get the gist’, ‘the scanning of the text to locate specific information’ and ‘the recognition of commercial or offensive content’. Less easy seems to be ‘the writing of suitable key words on the browser’, ‘the skimming of the results of the search engine’, and ‘the shorting out of relevant to the task Websites’. Higher in the degree of difficulty appear to be the skills of ‘resorting to other search engines for better results’, ‘evaluating the worth-reading sites’, ‘investigating of Website authors’ reliability’, ‘selecting suitable hyperlinks by
predicting their content’, ‘cross-checking information by reading other sources’ and ‘investigating Website authors’ reliability’.

The investigation of the influence of WebQuest on readers’ motivation and autonomy was ventured by the correlation of the Needs analysis and the post meant questionnaires. The data referring to the WebQuest motivating effect demonstrate the following. There was a considerable raise of learners’ agreement with the statements described as: ‘WebQuests contain interesting activities’ (Charts 1a&b), ‘WebQuests provision of knowledge in an appealing way’, ‘entertaining element of reading’, ‘WebQuests topics are presented more interestingly than the coursebook ones’, ‘you feel less stress of being marked’ and ‘WebQuest should be used more often as a teaching tool’. Likewise learners’ interest was raised in relation to the statements worded as how ‘interesting was the use of the computer and the Internet, reading sites written for everyday life, the use of audio-visual aids, the solving mysteries and exploration activities and the cooperation in groups, the undertaking of roles and the publishing of the final product’.

Count

<table>
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<th>WebQuests contain interesting tasks...</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>WebQuests contain interesting activities...</td>
<td>totally agree</td>
<td>6</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>agree</td>
<td>10</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>not sure</td>
<td>0</td>
<td>8</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>16</td>
<td>13</td>
<td>1</td>
<td>30</td>
</tr>
</tbody>
</table>

*Chart 1a. WebQuests contain interesting activities...*

**WebOuests contain interesting tasks...**

**Crosstabulation**

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
<th>df</th>
<th>Asymp. Sig. (2-sided)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Chi-Square</td>
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<td>4</td>
<td>.002</td>
</tr>
<tr>
<td>Likelihood Ratio</td>
<td>20,139</td>
<td>4</td>
<td>.000</td>
</tr>
<tr>
<td>Linear-by-Linear Association</td>
<td>4,770</td>
<td>1</td>
<td>.029</td>
</tr>
<tr>
<td>McNemar-Bowker Test</td>
<td>16,364</td>
<td>3</td>
<td>.001</td>
</tr>
<tr>
<td>N of Valid Cases</td>
<td>30</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Chart 1b. Chi-Square Tests*

With reference to the promotion of autonomy through WebQuest instruction, the findings prove that all the reading strategies which were activated throughout the WebQuest sessions promoted significantly their ability to operate autonomously. In particular, ‘searching through Websites and locating information’ is considered highly helpful. Respectively high are the percentages for the questions examining the strategies of ‘synthesizing information from sites’, ‘recalling prior knowledge’, ‘finding solutions and alternatives’ and ‘guessing meaning of unknown words from context’. The other strategies, namely ‘making predictions and checking them’, ‘making inferences relying on audiovisual aids’, ‘posing questions and answering them’, ‘planning what to do to achieve goals’, ‘taking steps to repair faulty comprehension’, ‘taking notes and summarizing information’ and
‘reflecting on and judging the effectiveness of your reading’ are also influenced positively up to a respectable degree. Statistically only two questions data analysis – ‘making inferences relying on audiovisual aids and ‘taking steps to repair faulty comprehension’ illustrate a remarkable difference. In the following bar charts the percentages before and after the Webquest application are depicted.

Bar chart 1 before – Bar chart 1 after

Bar chart 2 before – Bar chart 2 after

In relation to the category concerning their abilities in handling new literacies and reading on the Web the observations vary according to learners’ familiarization with ICT skills and electronic reading. For instance, the technical skills of locating search engines, writing key words on the browser and selecting relevant hyperlinks were easily manageable by the most. They could also carry out scanning and skimming of texts relatively easy with limited teacher guidance. For the activities that demanded more complex analysis and synthesis of information, such as evaluating Websites, cross-checking validity of information by reading other sources and checking out for improper content, teachers’ intervention with guidelines was more systematic.

With reference to motivation, observation showed that learners eagerly participated in every stage of the WebQuest, were interested in reading and locating information, in cooperating with others in groups and taking on roles. They seemed very excited while working with multimedia; they found some activities quite entertaining and expressed their wish to participate in WebQuest lessons in the future. Some of the learners were hesitant in the beginning, as these kinds of activities are newly introduced to the most, so the teacher’s encouragement was essential.
Concerning reading autonomy, students were facilitated in using strategies that enabled them to carry out the tasks. For instance, they predicted the meaning of unknown words using contextual cues and audiovisual means, they used self and peer correction, they took part in problem solving activities by recalling prior knowledge, searching in Web texts, rereading when needed and synthesizing information. In conclusion, observations demonstrated that WebQuest managed to train learners using self directed learning techniques.

The interviews were addressed both to the students and the teacher. The use of interview as a research tool made it possible to measure what a person knows (knowledge or information), what a person likes or dislikes (values and preferences), and what a person thinks (attitudes and beliefs) (Tuckman, 1972). In particular, most of the interviewed students, as well as their teacher, claimed that reading with WebQuest application is quite more interesting and engaging than the reading activities they have carried out so far in coursebook. They commented that they mostly liked the activities which were accompanied by video, sound and pictures and most of them found the role of travel agent quite intriguing. Specifically, they liked the tasks in which they were asked to recognize a famous person’s identity, well known places and tourist attractions and they also enjoyed reading Websites such as National Geographic. The fact that they would publish their presentation raised their eagerness but also caused a feeling of anxiety to some. They also stated that collaborative work, audiovisual aids and other WebQuest features, facilitated understanding when problems such as unknown vocabulary and misinterpretations arose. Students also agreed on some degree of difficulty in handling activities that demanded synthesizing of information from various sites. In this case teacher’s intervention could not be avoided. All in all, although most of them had some experience of reading Web pages for ELT projects, they welcomed WebQuest design as something new and intriguing.

5 Evaluation of the findings

5.1 Evaluating learners’ new literacies skills in relation to WebQuest application

The data testify that students employed their new literacies skills effectively. They used all the technical support properly and handled the search engines available to trace the relevant Websites, recognizing commercial links and Website forms. Unlike their initial reservations expressed in the Needs Analysis Questionnaire, observation and interviews showed that their involvement with WebQuest activities encouraged learners to skim and scan the texts but also apply their critical thinking in order to short out and synthesize information about the ancient site that they chose to advertise. The data postulate that learners acquired more self-confidence in making predictions on unknown content and vocabulary as they were helped by audiovisual context, WebQuest scaffolding techniques and by collaborating within their group. Eventually we conclude that within a WebQuest environment learners are enabled by scaffolding techniques, situated learning and collaboration, to exploit new literacies skills more decisively. However, some hesitations concerning the skills of cross-checking information and investigating authors’ reliability still remain.

5.2 Evaluating WebQuest motivational effect
As far as the investigation of the motivational effect of WebQuest to reading comprehension is concerned, the statistical, observational and interview data indicate the following. As it was stated in the theoretical part, the purpose of the WebQuest sessions was to raise intrinsic motivation. The data show that there was considerable change in learners’ perceptions about the degree of interest of the reading activities. They obviously found the way of presenting the topics more interesting than the one of the coursebook, the way of providing knowledge more appealing, the reading texts more entertaining and they felt less stress of being evaluated. According to intrinsic motivation theory ‘individual should be interested in the task at hand’ (Brewer, Dumn & Olszewski, 1988:151), so the tasks were constructed targeting to relate to personal interests.

‘The use of the computer and the Internet’ promoted intrinsic motivation as learners’ answers and behavior throughout WebQuest sessions demonstrated that they indeed consider it ‘as a modern and useful tool that enables them to be connected with the world’ (Vlachos, 2006:3). Warschauer (1996b) also claims that research suggests that online learning activities are generally quite motivating for language learners, in part because learners feel they are gaining technical skills, which will prove beneficial in the future.

The exploration of famous places and the undertaking of roles, eventually met the criterion of being interesting as the post meant questionnaire data and the other instruments showed remarkable raise of students’ interest. March (2000) arguing about the feature of ‘richness and complexity’ of WebQuest design, supports that ‘interesting thematic relationships and juxtapositions’ should be introduced and ‘roles are chosen that encourage students to problem-solve the best way to arrive at their design’. In this case, the use of problem solving activities and role undertaking verified the previous claims, as it had an undoubtedly encouraging influence to learners.

The use of authentic tasks considered by March (2003/2004) as motivating and supported by Keller’s ARCS Model of Motivational Design, was also exploited in order to ensure learners’ engagement with the Websites reading. Real-life tasks, which are ‘relevant to their needs, interests and motives’ (March, 2003/2004:44) proved quite stimulating. As a result, a great percentage of learners found the Website promoting British Museum current exhibition of Pompeii more interesting than the coursebook presentation of the same topic. Additionally, the reading of updated pages of National Geographic and Trip Advisor were considered more fascinating.

Dealing with audio-visual aids encouraged learners’ participation, as the combination of picture, sound and video attracted the interest of students with different learning styles and multiple intelligences and gave opportunities of achievement to all. Mentioning to Keller’s (1983,1987) theory of ARCS filter, March (2003/2004:44) mentions that WebQuest tasks should ‘inspire learners’ “Confidence” in achieving success and the completion of the activity should leave students with a sense of “Satisfaction” in their accomplishment. This goal is aimed by a media-rich and of varied perspectives electronic environment and by giving the students the chance to collaborate. Especially in a mixed ability group, every member can contribute and get satisfaction from the WebQuest learning process. Working in a stimuli rich and collaboration supportive environment, it was more than expected that learners would feel less evaluation stress. Finally the publishing of their final product that validate students effort by arranging for their work to receive some form of real-world feedback, caused important raise in learners will to get engaged.
5.3 Evaluating the promotion of reading autonomy through WebQuest implementation

The third research question intended to inquire into the effectiveness that the particular WebQuest design had in promoting readers’ autonomy. The impact of applying and practicing reading strategies and skills to acquisition of autonomy, is evident in questionnaires correlation results. There is remarkable increase in the degree the learners believe that WebQuest features enabled them to use reading strategies. The list of reading strategies investigated with the questionnaires was a combination of Grabe and Stoller’s (2002:16) and Anderson’s online reading strategies list, enriched with some metacognitive strategies adapted by O’Malley and Chamot (1990).

The data collected by the other instruments testify to the enforcement of reading strategies as well. As mentioned in the theory review, control, a fundamental aspect of autonomy, can be achieved by the management of learning, by control over the content of learning and over the resources (Benson, 1997). In our case learners were facilitated to control the learning process by taking initiatives, making choices on which Web resources to use, on selecting the information they considered relevant and deciding about the presentation of the final product. In this process they were supported by scaffolding techniques such as training in how to use resource links right away from the introduction part, guidelines provided in every WebQuest step in the form of bulleted instructions and audiovisual aids. Thus, with scaffolding support WebQuests ‘provide the way to integrate sound learning strategies with effective use of the Web’ (March, 2003/2004:43).

Moreover, observations and interviews show that metacognitive strategies were sufficiently applied. Learners were ‘planning’ their actions making short conferences in their groups. They made use of ‘directed’ and ‘selective attention’ as they were asked to find specific information from a variety of sources and media links. ‘Self-management’ and ‘self-monitoring’ strategies were employed as they took decisions and regulated their reading comprehension moving backwards and forward throughout WebQuest parts for clarifying and rereading hyperlinks when problems arose. ‘Problem identification’ and ‘self evaluation’ were promoted as learners took steps to repair faulty comprehension. In particular they made self and peer-correction encouraged by collaboration, by using hints disclosed through contextual means and multi-media and by having in advance their evaluation criteria in the form of a checklist.

To sum up, WebQuest design enabled learners to self-direct the reading process by activating higher level of thinking and monitoring. Data indicate the positive impact of WebQuest sessions in promoting critical thinking as learners were encouraged to synthesize information, to make predictions and check them, make inferences relying on audio-visual aids. Problem solving and authentic tasks stimulated readers to analyze and synthesize information in order to transform them into something new. Open ended questions techniques also facilitated this process. This WebQuest implementation, by challenging learners to reflect on their own metacognitive processes and become aware of their own thinking patterns, enabled them to develop independent use of effective learning strategies (Blackey & Spence, 1990). After all, as March (2003/2004:46) comments, ‘the goal is not for the students to do WebQuests forever or to blindly jump through this new and improved hoops, but rather to develop as independent, expert learners’.
5.4 Pedagogical implications

The evaluation of the findings clearly suggest that in the context of teaching reading in high school, the integration of well designed WebQuests can have spectacular influence to learners’ motivation and autonomy. Teachers can take advantage of the WebQuest motivational quality to stimulate even the more weak or indifferent students. WebQuest activities that contain authentic reading texts are more meaningful and enable students realize the utility of learning to read in order to deal with real life needs. The creative use of other media, such as graphics, audio and video give the opportunity for a range of students’ learning styles and talents to be promoted. Thus, WebQuests cultivate the ground for fruitful differentiated learning.

In relation to linguistic progress, the use of the Internet intrinsically motivating power, offers a more practical real life language experience, providing students with functional communicative experiences that serve their needs and motivate them to use English in their daily lives (Fox, 1998). Consequently Internet communicative power can be used for the purposes of EFL teaching of reading by enhancing learners’ literacy skills and reading strategies. Furthermore by employing stimulating techniques, such as interactive texts, role undertaking, collaborative group work, the publishing of the final product, the WebQuest design encourages learners’ involvement in communicative tasks and the cultivation of their communicative strategies. It is noteworthy to mention the statement made by the CEFR (2001:57) that “progress in language learning is most clearly evidenced in the learners’ ability to engage in observable language activities and to operate communication strategies”. In addition WebQuest invites readers to problem-solving activities that intrigue their creativity and offer opportunities for learning about other cultures and ways of thought.

Finishing with the WebQuest motivational impact, it should be highlighted that teachers should construct WebQuest tasks that satisfy the feeling of achievement to all students. As March (2002:2) suggests, “motivation theories argue that increased relevance can lead to better achievement”. Thus teachers should choose sources that give ample chances to every student to relate to his/her personality.

Concerning the promotion of autonomy, WebQuest methodology enables teachers to “structure a learning atmosphere where thinking about what happens during online reading will lead to stronger learning skills” (Anderson, 2003:5). March (2002:2) also argues that “the Web demands a learning-to-learn approach over the transmission of the pre-digested knowledge”. This learning to learn approach and the management of metacognitive strategies gradually leads learners to handle the reading of texts autonomously. Following March’s suggestion that the Web richness can turn the potential confusion into an opportunity to construct more complex mental schema, teachers are asked to organize and present the WebQuest material in order to provide learners with practice to life-long learning skills. In addition teachers should emphasize critical thinking, from the Introduction to the Evaluation part of WebQuest instruction and thus challenge learners to think which reading strategies to use, how to monitor, orchestrate and evaluate them in order to achieve the learning objectives. In conclusion, the researcher expresses her agreement with Anderson’s (2003:12) view that “metacognitive awareness of the reading process is one of the most important skills second language teachers can teach learners about reading” and WebQuest application can prove an invaluable teaching tool towards this direction.
5.5 Limitations of the research and suggestions for further research

Apart from the valuable findings that emerged during the WebQuest sessions, there were some limitations that may have obstructed the research from evolving further. First, the size of the sample was small. The researcher followed Borg and Gall’s (1979: 194-195) suggestion that correlational research requires a sample size of no fewer than thirty cases. Using the minimum size cannot always guarantee representativeness of the sample. However, the sample size ‘might be constrained by cost-in terms of time, money, stress, administrative support, the number of researchers and resources’ (Cohen, Manion & Morrison, 2002:93). In our case, the reasons were the lack of time and space and the strict school schedule.

The lack of time has also affected the duration of each session as well as the number of the sessions. Due to the pressure of written tests, final exams, grades and other administrative issues, the teacher of the class had to cover particular percentage of coursebook material. As a result, the WebQuest schedule was very strict and sometimes the procedures should be shorter. In the evaluation part for instance, the teacher and the students did not have enough time to discuss their strong and weak points that appeared throughout sessions. Technical issues, such as the low speed of the school Internet connection, further inhibited the normal pace of the WebQuest processes.

Considering the above some further improvements in a future experiment could be suggested. For instance, an ideal size of the sample should be the whole population of the junior high school by adapting only the language level to each grade. This way the representativeness and validity of the sample and the generalizability of results could be raised even more. Additionally the time devoted to the WebQuest sessions should be increased by expanding the span to cover a longer school period. Thus the researcher, the teacher and the participants would have the chance to correlate the WebQuest tasks with parallel reading tasks taken from the coursebook and realize WebQuest impact with a long-term perspective. Moreover the students would have the chance to conduct conferences discussing their views and exhibiting their final products. The feedback generated by these procedures, could be exploited in order to increase WebQuest motivating quality and autonomy effect. Participating in a longer term WeQuest, students would have the time to process a richer variety of Web sources suggested by the teachers of other lessons. Specifically for the particular WebQuest thematic area the teachers of Geography, History and Art could co-operate with interesting contributions, providing a cross-thematic approach to EFL learning.

6. Conclusion

Realizing the increased naturalization of online reading, teachers and researchers in TESOL field, face the need to harness this overwhelming influence for the sake of education. More particularly, teachers of Junior high school students owe to be up to date and satisfy teenage learners’ tendency for independence. Realizing the above, the researcher decided to experiment with the use of the WebQuest tool. The purpose of this reading focused instruction was to keep learners as motivated as possible, throughout autonomous reading processes.

Learners’ new literacies skills development in relation to reading on the Web was investigated. The rapid growth of Internet with the subsequent evolution of participatory
tools and sites and the multimodal production, constitute new demands as well as open new perspectives in L2 learning. Hopefully, the findings proved that the majority of learners can respond adequately to online electronic reading skills.

In the area of motivation, as Robb (2000) claims ‘research shows that as children progress through school their interest in reading for pleasure and their motivation to read to learn diminish’. As findings indicate, WebQuest can serve as a powerful teaching tool, employing a variety of authentic texts that challenge readers’ investigative and creative thinking. Open ended questions, problem solving tasks and prolific collaboration have a lot to offer in a well organized WebQuest environment. Integrative motivation principles can be fruitfully elaborated through WebQuest application generating major educational implications.

Moreover, the learning to learn approach adopted by WebQuest, enforces the modeling of how to use reading strategies effectively. Learners of this age have intense need for self-control and self-determination. As results showed, WebQuest can instill learners with confidence so as to manipulate an information abundant, electronic world autonomously and critically estimate its educational value.

Notes

1. According to Dodge (2001) scaffolding is a temporary structure used to help learners act more skilled than they really are. This can be achieved as learning is broken up in chunks or steps, providing a structure for each one separately.
2. Intrinsic motivation’ is manifested when the individual is interested in the task at hand. It comes from within the individual and participation in the task is the end pursued (Manolopoulou-Sergi, 2004).
3. The initials stand for Attention, Relevance, Confidence and Satisfaction.
4. Control is a fundamental aspect of autonomy and according to Benson (1997), control over the management, over the content of learning and over resources can be developed through growing awareness of the language learning process.
5. Teacher-initiated research. Teachers look critically and systematically at their own classrooms for the purposes of improving their own teaching and enhancing the quality of learning that takes place (Grabe & Stoller, 2002).

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Interactive Whiteboards: EFL Teachers’ Practices and Pedagogy in the Greek Reality

Sophia BASMATZI

The purpose of this paper is to showcase one particular aspect of information technology, the electronic interactive whiteboard (IWB), with the view to recording the perceptions and practices of teachers who use it in Greek private foreign language centres where IWBs are rapidly adopted as a multimedia teaching tool. The driving force behind this research was to explore the value of IWBs as an instructional tool closely associated with teachers and their pedagogy with the view to drawing conclusions pertaining to successful IWB implementation in education. The research revealed teachers’ satisfaction with most aspects of IWB use but also the need for teachers’ training on using the IWBs to shift their pedagogy towards more interactive, social, student-centred learning.

Ο σκοπός της παρούσας εργασίας είναι να καταδείξει τις αρετές ενός συγκεκριμένου τομέα της πληροφορικής, του ηλεκτρονικού διαδραστικού πίνακα, και να καταγράψει τις αντιλήψεις και τις πρακτικές των καθηγητών που τον χρησιμοποιούν στα Ελληνικά ιδιωτικά κέντρα ξένων γλωσσών όπου οι διαδραστικοί πίνακες γρήγορα υιοθετήθηκαν ως ένα εκπαιδευτικό εργαλείο που χρησιμοποιεί πολυμέσα. Η κινητήριος δύναμη πίσω από αυτή την έρευνα ήταν η διερεύνηση της αξίας των διαδραστικών πινάκων ως εκπαιδευτικά εργαλεία που έχουν άμεση σχέση με τους καθηγητές και τις παιδαγωγικές τους αντιλήψεις με σκοπό την εξαγωγή συμπερασμάτων σχετικά με την επιτυχημένη εφαρμογή τους στην εκπαίδευση. Η έρευνα αποκάλυψε την ικανοποίηση των καθηγητών με τις περισσότερες πλευρές των διαδραστικών πινάκων, όπως επίσης και την ανάγκη για επιμόρφωση των
key words: Interactive Whiteboards, Greek foreign language centres, teachers’ perceptions and practices, teacher-centred approaches, learner-centred approaches, supported didactic, interactive, enhanced interactive

1. Introduction

The later part of the 20th century saw radical changes regarding computer and communication technologies which have given students the opportunity to “interact with each other, with their teachers and the information itself” (Schroeder, 2007, p. 1), within the realm of ‘constructivist’ learning theories based on the work of Piaget and Vygotsky. This paper showcases one recently new technological medium, the electronic interactive whiteboard (IWB) with the view to hearkening the reactions of teachers who use it in Greek private foreign language centres where IWBs are employed as a multimedia teaching tool. However, this rapid uptake of IWBs raises questions about teachers’ perceptions and uses regarding this teaching medium.

While the literature suggests that there are numerous benefits associated with the use of IWBs as an instructional tool, their implementation and efficacy in foreign language centres in the Greek EFL context have not been rigorously investigated. This is due to the fact that although IWBs have become common practice worldwide, their deployment in Greece has not been so extensive yet. In fact, research so far, not in the Greek reality however, shows conflicting results concerning the pedagogical impact with findings indicating the promotion of teacher-centred approaches and low-level student engagement (Hall & Higgins, 2005; Miller & Glover, 2002; Vincent, 2007). Nevertheless, there is research (Kennwell, 2005; Lee & Winzenried, 2006; Vincent, 2007) which shows that there is potential in IWBs to change pedagogy when the teacher employs all IWB capabilities or ‘affordances’ and design features (Hartson, 2003) to cater for the diversity of students in the class and enhance interactivity, collaborative group working and the shared scaffolding of learning alongside the teacher or peers.

In particular, this study seeks to shed light on:

- the diversity of teachers’ perceptions regarding IWBs in Greek foreign language centres,
- teachers’ common IWB practices,
- the consistency or inconsistency between reported perceptions and practices,
- the model of pedagogy promoted (a traditional/ teacher-centred approach or a progressive/ functional/ learner-centred learning environment)
- the perceived problems and solutions for a more effective use of IWBs.

More specifically, the paper is organised into six sections comprising a brief literature review on IWBs and theories of pedagogy behind the effective integration of IWBs (section 2), a presentation of the research design and methodology (section 3) and a presentation and discussion of the findings (section 4) followed by the pedagogical implications, limitations of
the study, recommendations for further research (section 5) and concluding remarks (section 6).

2. Literature review- Interactive whiteboards and pedagogy

There is consensus that the IWB has the potential to mediate pedagogy and change classroom dynamics. However, there have been conflicting research findings concerning the nature of this pedagogical change. On the one hand, Miller & Glover (2002) and Kennewell (2006), identify a shift towards teacher-centred practices with the teacher assuming the dominant role of the IWB use and low-level student engagement and interaction with the IWB which is not conducive to enhanced learning results. Students’ engagement with the board is limited only to manipulating items on it without any chances for self-directed learning.

On the other hand, research indicates that IWBs constitute a teaching tool which can instigate change. According to Kennewell & Morgan (2003, p. 71), there are a number of key features which take their role beyond a mere presentation device:

- their interactivity, which facilitates active learning, not just passive reception of information;
- their size, which facilitates collaborative group working;
- their accessibility for all learners but especially young children;
- their recordability, so that any end product can be stored for subsequent re-use, or deconstructed to analyse a process;
- their visual element, which can facilitate concept acquisition, motivate pupil participation and reinforce learning (Glover et al., 2005).

Exploiting these features, IWBs can promote learner-centred practices and result in enriched learning outcomes (Shenton & Pagett, 2007; Wood & Ashfield, 2008). However, in line with Vincent (2007), in order for IWBs to enhance learning opportunities, a teacher should exploit their design characteristics such as multimedia, built-in technical tools, websites and other connected peripherals that can promote the learning process. Similarly, Shen & Chuang (2009) point out the need for further improvement of the tools for making interactive presentations.

More specifically, according to Beauchamp & Parkinson (2005), beginners use IWBs as traditional blackboards while advanced users use them by employing more interactive teaching strategies. When teachers begin to reflect on their practice and, as new skills are mastered, they can develop new methods to interact not only with technology but also with the class as well as allowing the class to interact with each other.

Similarly, McCormick & Scrimshaw (2001) assert that teachers can use the IWBs in three ways: as an aid to efficiency where the enhanced screen size has led to improved vision of video material, as an extension device with the integration of multimedia materials to the point that the quality of teaching is improved, and as a transformative device where the learning takes place through board interaction and associated group and class discussion. Moreover, Glover et al. (2005, p. 158) indicate the need for a “two-pronged pedagogic change from the didactic to the interactive approach to learning and teaching, and from the
use of IWBs and multimedia as a visual support for lessons to the integration of the technology and media into lesson planning”. More specifically, teachers tend to pass through three pedagogical phases as they develop their technical abilities and gain understanding of the nature of interactivity (Miller et al., 2005). These are:

- Supported didactic. According to this approach, teachers make some use of the visual element of the IWB to illustrate concepts instead of helping the students develop conceptually through them. They follow a traditional teacher-centred approach although they may begin employing their own material in a traditional way via Excel, Powerpoint or other commercially produced programs.
- Interactive. This phase is characterised as a progression from the supported didactic stage although the full potential of IWBs is not fully realised and developed. Even though teachers may lack confidence in utilising the technology, they integrate the IWB into their instructional practice and try to explore further the capabilities of Excel, Powerpoint and the software accompanying the IWB in order to aid the conceptual development of their students through various verbal, visual and aesthetic stimuli.
- Enhanced interactive. This stage marks a progression from the interactive stage. Teachers consider technology an integral part of their lesson and try to foster the cognitive development of their students by taking advantage of the interactive feature of IWBs. They are familiar with the techniques available, confident with the use of technology and offer their students the opportunity to engage in individual or collaborative active learning by reacting to the IWB stimuli.

It follows then that for a real transformation of pedagogy, teachers need to use IWBs as a transformative device and adopt a more interactive approach to instruction, for, as Guimares et al. (2000) claim, the IWB technology can improve learning only through a “process of co-construction sustained by ‘organic, adaptive and generative’ learning material” (Glover & Miller, 2001, p. 258).

In conclusion, research findings recognize the potential value of using IWB technology although there is scepticism concerning their pedagogical impact. Teachers’ perceptions and attitudes regarding IWBs may vary and that is why their practices need to be explored as well, in order to draw conclusions regarding IWB effective implementation.

3. Research design

3.1 The participants in the research

The target population in this research was teachers of English who work in Greek foreign language centres and use IWBs in their teaching.

3.2 Purpose and significance of the study

In Greece, IWBs are used in most private schools and foreign language centres, institutes and universities and they have recently been introduced in primary and secondary state schools although their number is quite limited. While many foreign studies (Bell, 1998; Beeland, 2002; Cogill, 2002; Levy, 2002; Beauchamp, 2004; Wall et al., 2005; Moss et al.,
2007) have attempted to explore teachers’ perceptions, needs and preferences regarding IWBs, their implementation and efficacy in the Greek EFL context have not been rigorously explored. Research findings in the Greek foreign language context have attempted to investigate EFL public teachers’ attitudes towards educational technology in general (Hadjirigas, 2012), or the use of IWBs to enhance intermediate EFL students’ motivation (Pieri, 2010), teach vocabulary to young learners (Bakou, 2012) and implement process writing in conjunction with online collaborative writing (Kritsotaki, 2010) but the perceptions and practices of teachers who work in Greek private foreign language centres had not been explored.

Thus, the main purpose of this study was to gain some insight into the usage of IWB in foreign language centres and explore the relationship between teachers’ existing perceptions and practices, and other key variables that are thought to be influencing these practices such as age, teaching qualifications, teaching experience with IWBs, training and frequency of use. Additionally, the research attempted at exploring the extent to which teachers endorse teacher-centred or student-centred approaches and categorising them according to the typology of type of use of IWBs (see section 2) varying from ‘supported didactic’, and ‘interactive’ to ‘enhanced interactive’ (Miller et al., 2005) or, in other words, in terms of whether the IWB is used only as “a teaching aid” or as “a truly interactive device at the heart of all teaching” (Glover & Miller, 2001, p. 258).

3.3 The research methodology

3.3.1 Questionnaire

A ‘self-completion questionnaire’ (Dörnyei, 2003) was emailed to many EFL teachers who work in Greek private foreign language centres and it was answered by 80 of them (see Appendix). More specifically, the questionnaire was developed for this research after studying several studies concerning perceptions, practices, instructional theories and problems of IWB users (Bell, 1998; Glover & Miller, 2001b; Beauchamp, 2004; BECTA, 2004; Beauchamp & Parkinson, 2005; Glover et al., 2005; Türel & Johnson, 2012). It included multiple choice set of questions, Likert scales and ranking questions soliciting information concerning demographic data, teaching experience and training with IWBs, information on the practices and perceptions towards IWBs, as well as problems and solutions associated with their effective use (see Appendix). The last part of the questionnaire entitled ‘general comments’ included open questions (based on Bell, 1998) inviting teachers to provide freely any comments they wanted hoping to reveal information which had not been anticipated or recorded previously.

3.3.2 Analysis of quantitative data

The quantitative data yielded after the administration of the questionnaire was analysed in three different ways delineated below employing the IBM SPSS statistics software. A first stage of analysis was to record the percentage of teachers who possess a certain belief or adopt certain classroom practices and display these figures in the form of tables, pie or bar charts. Furthermore, an attempt was made to develop a primary evaluation model in order to identify the position of teachers on a continuum which measures the pedagogic phases they go through as they become more fluent with techniques and gain understanding of the
nature of interactivity (Miller et al., 2005). These phases which were discussed in detail in section 2 are the ‘supported didactic’, the ‘interactive’ or ‘enhanced interactive one’. For this purpose, the statements of question 16 (Q16), which refer to the frequency of using certain IWB features, and the statements of question 17(Q17) (see Appendix), which indicate teaching pedagogical practices with the IWB, were considered relevant to examine. From these statements, a selection was made in order to ensure that the ones with the optimal correlation were chosen. To this end, Cronbach’s Alpha estimation method for an internal consistency and reliability test was used. From Q16, the items with the strongest correlation chosen were numbers 2,5,10,11,12,13,14,15,16,17 (Cronbach’s Alpha= 0.845) and from Q17 statements 7,9,10,11,13 (Cronbach’s Alpha=0.780). More specifically, in Q16, the variables chosen (see tables 1 & 2 below) were Beauchamp & Parkinson’s (2005, p. 102,) possibilities of progression in IWB skill mastery. From Q17, items 7, 9, 10, 11 were also adapted from Beauchamp & Parkinson’s (2005, p. 102,) research to account for a progression in interactivity starting from a didactic approach and moving to methods that include greater pupil involvement.

Table 1

The mathematical actualization of this progression was made possible with the introduction of linear weighting factors for the variables in each section. Each variable was credited points in a descending order in the Likert scale, i.e. 3 points for marking ‘always’, 2 points for ‘often’, 1 point for ‘seldom’ and 0 points for ‘never’. These points were then multiplied by the corresponding weight factor for each variable.
Each respondent could be credited a maximum score of 165 for each category (Q16 and Q17) and the final score was the mean value of the scores of these two subsets. The researcher assumed that the total ranking of the respondents would follow a normal distribution pattern deriving from the range of 0-165 with Mean=82.5 and St.D.=27.5. Following this distribution, the three major categories of teachers’ pedagogical phases were defined as:

\[
\begin{align*}
0 \leq & \text{ Supported Didactic} < 55 \quad (1) \\
55 \leq & \text{ Interactive} < 110 \quad (2) \\
110 \leq & \text{ Enhanced Interactive} \leq 165 \quad (3)
\end{align*}
\]

(1) \( M - \text{ St.D.}=55 \), (2) \( M + \text{ St.D.}=110 \), (3) \( \text{ Range} \in [0,165], M=82.5 \)

After the calculation of each participant’s final score, the researcher performed the Kolmogorov-Smirnov test\(^4\) to examine the form of the distribution of the respondents’ score and found that this distribution was normal (p-value=0.746>a=0.05). Therefore, the initial hypothesis for the normal distribution of participants’ answers and the accuracy of the ranking model was confirmed.

Another step in the analysis of the quantitative data was to look for causative relationships between variables such as age, teaching qualifications, teaching experience in general, teaching experience with the IWB, training on the use of IWBs and frequency of use, and the total ranking of respondents. For this reason, the results from questions 2,5,6,8,11,14 were cross-tabulated with the respondents’ classification from Q16 and Q17 and their correlation was checked by performing Chi-Square Tests\(^3\).
Finally, the analysis aimed at examining whether there is consistency or discrepancy between teachers’ perceptions and self-reported practices. To this end, statements 22, 23, 24, 25 from question 18 (Q18) regarding the ability of IWBs to improve students’ speaking, listening, reading and writing skills were compared to question 13 where teachers report on their use of IWBs to teach these skills. Additionally, item 20 from Q18 regarding teachers’ perception about the degree to which IWBs give students greater opportunities for participation and collaboration were compared to items 4 and 6 from Q17 where teachers referred to their frequency of promoting cooperative learning and the active participation of learners respectively.

3.3.3 Analysis of qualitative data

For the analysis of the respondents’ answers to the open questions regarding IWBs, a phenomenological approach⁴ (Cresswell, 1998), was deployed in order to highlight significant statements, develop clusters of meaning and identify themes that emerged from teachers’ experiences of the phenomenon (ibid.).

Moreover, a categorical aggregation process (Stake, 1995) and direct interpretation were applied to the open questions of the questionnaire in order to identify common and contrasting themes. More specifically, direct interpretation was applied as the researcher looked at single instances and drew meaning from them without looking for multiple instances (Cresswell, 1998). Categorical aggregation entailed looking for an emergence of meaning through the repetition of phenomena (Stake, 1995). In other words, when coding the data, the researcher did not just notice the repetition of instances but also noticed significant things which occurred only once. Furthermore, a more holistic open-ended analysis was carried out to deal with other issues that arose.

4. Findings and discussion

For a more analytical presentation of the descriptive results, see the author’s dissertation thesis (Basmatzi, 2013) for the Hellenic Open University.

4.1 Teachers’ personal details

According to the findings, the vast majority of teachers were female (91.3%), while most of the respondents were 25-30 years old (40%) with a high percentage belonging to the age group 36-40 (23.75%). Regarding their teaching qualifications, half of them were university degree holders (51.2%) whereas another significant percentage (28.7%) was in the process of acquiring a Master’s degree. It is also worth mentioning that 6 participants were highly qualified since they possessed a PhD or were in the process of acquiring one whereas 10 respondents did not have pedagogical training as they were only proficiency certificate holders. The majority had been teachers for less than 5 years (40%), while the second higher proportion was that of teachers with 6-10 years of experience. Moreover, the vast majority taught mostly children or teenagers and mainly junior or elementary students (66%).
4.2 Teachers’ experience and training with IWBs

Regarding teachers’ experience on the IWB, 37.5% had been using IWBs for 3-5 years whereas an equally significant percentage (32.5%) was novice users with experience of less than a year. It is also worth noting that a very small proportion of teachers (5%) had used IWB for more than five years, which can be attributed to the fact that IWBs is a technological tool recently introduced in the Greek reality.

In relation to training on the use of IWBs, the vast majority (72.5%) were trained by EFL publishing houses. Moreover, a significant 38.8% were trained by educational seminars, one-fifth of the respondents report being trained by colleagues whereas some (22.5%) are self-taught. However, many participants were trained in various ways. For example, 21 respondents out of the 58 trained by publishing houses also reported having attended educational seminars whereas 15 of them were also trained by the IWB vendor, 4 were self-taught and 10 out of the 58 were helped by colleagues as well.

4.3 Teaching practices regarding IWBs

The overwhelming majority of teachers (91.3%) use the IWB to practise grammar and vocabulary with their students and a high proportion of 75% to practise reading. Listening follows with a percentage of 70% while it is worth noting that only around 45% uses IWBs to practise speaking and writing with their students. Concerning frequency of IWB use, it seems that the majority of respondents make frequent use of the IWB with the 37.5% using it every day followed by a 23.8% who use it once or twice a week and another 20% who use it three or four times a week. Only a very small percentage of 2.5% report making rare use.

Moreover, in relation to teachers’ usage of computer applications via the IWB, the overwhelming majority (97.5%) of respondents use the IWB to access the IWB software of the coursebook used whereas 58.8% use it to access ‘You tube’ and around 45% DVDs and CDroms. It is worth noticing the low percentages of people who use concordances (11.3%), e-mails (8.8%), blogs and wikis (13.8%) and digital storybooks (16.3%) as well as the null percentages of teachers who access active worlds or do webquests with the use of IWBs in class. Thus, teachers use traditional applications of technology and do not make use of Web 2.0 technologies, interactive multimedia environments and synchronous or asynchronous online networking which could provide students with “ample opportunities for exposure to authentic linguistic input” promoting cultural understanding and finally, language learning (Kern & Warschauer, 2000; Shetzer & Warschauer, 2000; Vlachos & Athanasiadis, 2005, Vlachos & Papaefthimiou-Lytra, 2008).

With regard to the ways teachers treat IWB features, the questionnaire yielded the following results: The majority of respondents claimed that they often write text on IWB in a similar way to the traditional whiteboard (36.3%), use pre-prepared text and graphics (38.8%), emphasise using the tickertape or spotlight function (41.3%), annotate and modify using the pen or arrows and lines (46.3%) and link to internet sites (51.2%), which indicate a relatively basic use of the IWB affordances (Beauchamp & Parkinson, 2005). Moreover, it is interesting to see that a considerable percentage of teachers responded that they never employ more advanced IWB features which indicate more technical mastery (ibid.) and enable the teacher to “move away from a linear progression to a more discursive model where the technology can allow ideas to move in many directions” (ibid., p. 102). In parallel
with previous studies in other contexts (Türel, 2011, Türel & Johnson, 2012), teachers make limited use of the IWB affordances since features such as hyperlinks which are considered to show a high level of IWB skills are the least utilised. More specifically, teachers denoted that they never store on flipchart pages (53.8%), link to other pages in the flipchart (48.8%), employ PowerPoint and annotate slides using IWB software (52.5%), use hyperlinks to switch between pages (57.5%) or programmes (67.5%) and prepare a library of resources for the IWB (52.5%).

As for the teaching methodology employed when using IWBs, the analysis revealed the following results: The vast majority (68.8%) always use the IWB software accompanying the coursebook used and only a 18.8% always create their own teaching material. This is not surprising as in the context of Greek private foreign language centres, some language schools invest a considerable amount of money in buying the relative equipment while other schools resort to the ‘easy solution’ of adopting a specific IWB software and textbook series accompanying a complimentary projector by publishing houses. This software by educational publishers entails electronic versions of pages from the textbook or workbook making very limited use of the interactive potential of IWBs.

Moreover, a great percentage of the participants (65%) claim they always encourage the active participation of learners, often encourage cooperative learning with the IWB (48.8%), negotiate and adapt the tasks and activities to suit students’ needs rather than impose them on the learners (52.5%) and train the learners to take responsibility for their own learning using the IWB (56.3%). However, quite inconsistently, 37.5% of the teachers report that they never jointly do activities such as labelling, drawing or constructing graphs on the IWB or seldom co-construct arguments and explanations on the IWB (36.3%).

**4.4 Teachers’ perceptions regarding the use of IWBs**

Similar to previous research findings (BECTA, 2003; Beeland, 2002; Bell, 1998; Bell, 2002; Moss et al., 2007; Türel & Johnson, 2012), the overall tenor of responses to the questionnaire regarding the use of IWBs was positive with teachers recognising the numerous benefits for teachers and students among which the accommodation of various learning styles, the motivational aspect, the presentation of resources and the facilitation of interaction being the most prominent. Moreover, there was consensus that teachers are the agents of change who can realize the potential of IWBs provided they are given opportunities by the foreign language centre owners to implement new technology.

With regard to benefits associated with teachers, most respondents agree that IWBs are easy to employ, promote the teachers’ organisational skills and reduce the workload. However, when asked to respond to the negative statement “IWBs minimise the teacher’s role”, the majority disagreed (58.8%) or strongly disagreed (12.5%) with a notable 21.5% who adopted a neutral position.

Additionally, the analysis of the respondents’ perceptions showed that the teachers surveyed acknowledge a variety of benefits for their students. In particular, they agree that IWBs help focus students’ attention on the large IWB screen (27.5% strongly agree, 62.5% agree), are suitable for a wide range of age groups (32.5% strongly agree, 56.3% agree), enhance students’ motivation (30% strongly agree, 55% agree) and give students greater opportunities for participation and collaboration (37.5% strongly agree, 46.3% agree).
However, the statement with the strongest agreement of all (40% strongly agree, 50% agree) is that “IWBs involve a multimedia/multisensory presentation accommodating different types of learners as teachers can call on a variety of resources to suit particular needs”.

4.5 Potential problems and possible solutions using IWBs

For most respondents and broadly in line with the results of several studies (Glover & Miller, 2001b; Hall & Higgins, 2005; Malavet, 1998; Smith et al., 2005; Türel & Johnson, 2012), inadequate (65%) or lack of technical support (67.5%) when problems occur and lack of training on how to integrate IWBs in their lessons constitute major obstacles. Emphasis is also put on the cost of equipment (53.8%) and the incompatibility of different IWB makes with the available computers (52.5%) followed by students’ unwillingness to participate (46.5%), lack of time to use IWBs as there is a lot of course material to cover (45%) and lack of time to prepare resources (38.8%), as also reported in Sicilia (2005). Moreover, a 38.8% report that they are hindered by slow internet connection and insufficient access to IWBs (37.5%) (as in BECTA, 2004; Gomes, 2005). Furthermore, the selection of equipment (48.8%) and teaching materials (40%) are reported as being minor problems whereas increased noise levels (62.5%), setting up the board (51.2%), logistical problems of situating the board (40%) and lack of computer literacy (42.5%) do not constitute a problem for most respondents.

Quite consistently, the ranking of the solutions in question 21 of the questionnaire corresponds with the ranking of problems identified above. More specifically, available technical support is reported as the most important solution, followed by the inclusion of IWBs in the school timetable, training on the integration of IWBs and finally, training on computer literacy.

4.6 General comments (answers to open questions)

The majority of teachers expressed their satisfaction with comments such as “it’s an asset to the English classroom” or “it’s a must” as they consider IWBs an integral part of the 21st century classroom. However, some teachers contended that they are not given much latitude by their school owners to use the IWB very often and more creatively as the material to be taught has to be followed to the letter.

Moreover, several respondents admitted that IWBs are still in their infancy regarding exploitation as most teachers are computer illiterate while one user noted that “IWBs are a useful tool in the hands of the teachers but they should be used in moderation and in combination with other activities that promote students’ interaction with each other as well as their cognitive skills and critical thinking”. Finally, a user commented that “an IWB alone cannot bring success without an effective teacher or a good syllabus away from teacher-centred practices”.

4.7 A grading of the respondents’ practices – pedagogical phases

As another method of analysing data, the Likert scales were used in order to categorise the respondents according to whether they endorse teacher-centred or student-centred practices. Using the evaluation model described in section 3, teachers were graded in terms
of their technical mastery (based on Q16, MeanQ16=51.81, St.DQ16=36.9), their progression in interactivity (Q17, MeanQ17=78.15, St.DQ17=38.3), and according to their answers to both Q16 and 17 (MeanQtotal=64.98 and St.DQtotal= 33.4) and was found that the distribution of total grading fits a normal one (p-value= 0.746 > α= 0.05). Furthermore, significant differences were also identified (p-value < 0.000 < α=0.05) between the grading results of Q16 and 17 (ΔMean=26.33-15.96%). Finally, according to the applied ranking model for each participant score from Q16, Q17 and from both of them, the respondents were identified as belonging to one of the three categories: ‘supported didactic’, ‘interactive’ and ‘enhanced interactive’ (Miller et al., 2005).

According to the statements of Q16, which refer to the frequency of using certain IWB features, out of the 80 respondents, 56 (70%) are found to belong in the ‘supported didactic’ phase indicating the use of a teacher-centred modality. More specifically, these teachers make some use of the IWB as a black/whiteboard substitute to illustrate rather than develop concepts (Miller et al., 2005) and engage in basic use of technology. Another 17.5% (14 teachers) is found to be in the ‘interactive phase’ advancing technically, exploring further the potential of PowerPoint and the software tools that accompany the IWB but without exploiting the full potential of IWB technology (ibid.). In line with Somekh (2006, in Koenraad, 2008, p. 20), IWBs are used mainly to “enliven and enrich didactic pedagogy” facilitating traditional conveyance of concepts. Finally, 12.5% (10 teachers) belong to the ‘enhanced interactive’ category as they exploit the interactive capacity of technology to “create a new learning praxis” (Beauchamp, 2004, p. 343).

With regard to the reported pedagogical practices that teachers employ when using IWBs in their classroom, the results are quite different. 19 teachers (23.8%) are found to be in the ‘supported didactic’ phase, where the teacher retains control of the IWB and there is little interactivity which is required for enhanced learning (McCormick & Scrimshaw, 2001). The number of teachers who are considered to be in the ‘interactive’ stage is higher with 39 teachers (48.8%) progressing from a traditional didactic stage to a more interactive one. Finally, 22 teachers (27.5%) are graded as ‘enhanced interactive’ making technology an integral part of their lesson (ibid.) and transferring more responsibility to students for their own learning (Beauchamp & Parkinson, 2005).

Furthermore, in terms of both their technical mastery and pedagogical practices 30 teachers (37.5%) are graded as ‘supported didactic’, 40 as ‘interactive’ (50%) and 10 of them (12.5%) as ‘enhanced interactive’.

Notably, the significant differences between the categorisation of respondents according to IWB skill mastery and practices raises questions as to how reported basic use of IWB technology can lead to reported ‘interactive’ or ‘enhanced interactive’ learning.

4.8 Cross-tabulations

4.8.1 Investigating causative relationships between variables

One more stage in the analysis of the questionnaire was to investigate the possible causative relationships between certain variables of the questionnaire and the final categorisation of respondents using Pearson chi-square tests. It was found that the age of the respondents (p-value=0.131 > α=0.05), their teaching qualifications (p-value=0.211 > α=0.05), their
training by IWB vendors, (p-value=0.530 > α= 0.05), by educational seminars (p-value=0.735 > α=0.05), by colleagues (p-value=1 > α=0.05) or when self-taught (p-value=0.144 > α=0.05) did not have a significant effect on the categorization outcome. More specifically, unlike research conducted by Herbert (2002), the results indicated that older teachers are not technophobes, whereas teachers’ further qualifications such as a postgraduate degree does not seem to influence teachers’ attitudes towards innovation (unlike Johnson, 2006).

The factors which seem to influence the final categorization of respondents and are good predictors of IWB skill employment, as also suggested by Moss et al. (2007) and Türel & Johnson (2012), are their teaching experience in general (p-value=0.000 < α=0.05), their teaching experience with the IWB (p-value=0.017 < α=0.05) and the frequency of IWB use (p-value=0.015 < α=0.05). More specifically, according to Somekh et al. (2007), when the use of IWBS is embedded in teachers’ pedagogy after sustained experience (around two years) with IWBS, teachers may alter their practices to exploit the technological potential.

4.8.2 Comparing teachers’ perceptions with self-reported practices

The final step of the analysis sought to explore whether there is consistency or inconsistency between teachers’ perceptions and self-reported practices. To this end, some of the perceptions recorded in Q18 were examined in relation to some practices from earlier sections of the questionnaire. More specifically, a cross tabulation was performed to examine whether teachers’ perceptions regarding the potential of IWBS to improve students’ reading (statement 24), listening (statement 23), writing (statement 25) and speaking (statement 22) coincided with teachers’ practices with regard to these skills from the responses to Q13. The analysis revealed the following results:

Out of the 47 respondents who denoted that they strongly agree and agree that IWBS help improve students’ reading skills, 9 of them (19.1%) stated that they do not use IWBS to practise reading. Conversely, 5 out of the 7 teachers who expressed their disagreement, admitted to making use of IWBS to enhance their students’ reading skills. In relation to listening, 13 respondents (22.8%), out of the 57 who expressed their agreement with the IWB potential to improve students’ listening skills, stated that they do not use IWBS for listening practice.

Moreover, out of the 33 teachers who agree that IWBS help improve students’ writing skills, a significant number of respondents (12 teachers, 36.36%) do not use them for writing practice. As for speaking, 18 (47.36%) out of the 38 respondents who gave positive answers regarding the ability of IWBS to improve speaking, reported that they do not use them to practise speaking whereas 2 out of the 6 who disagreed reported using them for speaking in their practice.

It is also worth noticing the distribution of neutral points between the positive and negative answers as regards the use of IWBS and the practice of the four skills. It is interesting to see that as far as listening and reading are concerned, the majority of respondents (65%) who adopted a neutral position reported using IWBS to practise these skills whereas concerning speaking and writing, an equal percentage recorded not using IWBS to practise them.
Furthermore, teachers’ perception regarding the potential of IWBs to “give students greater opportunities for participation and collaboration” was cross-examined with statements 4 and 6 from Q17. The analysis revealed that out of the 67 participants who expressed their agreement to the above statement and who we would expect to encourage student participation and collaboration either ‘always’ or ‘often’, a 17.7% (12 teachers) stated that they seldom encourage cooperative learning and another 8.95% (6 teachers) that they seldom encourage the active participation of learners.

These results as well as the findings from the previous cross-tabulation indicate that there seems to be incongruence between teachers’ stated beliefs and their instructional practices. Although some respondents hold beliefs which are progressive and favour collaborative learning and student autonomy, their self-reported practices exhibit features of a transmission teaching model which, as Anderson (1985) maintains, can be attributed to the fact that although teachers possess declarative knowledge (what to teach), they lack the procedural knowledge (how) which would enable them to put theory into practice.

The incongruence between teachers’ perceptions and practices is to be expected. Research has shown that teachers’ ability to articulate and implement their theoretical beliefs in their instruction is controlled and limited by the complexities of their schools and classrooms (Duffy, 1982; Duffy & Anderson, 1984; Duffy & Ball, 1986; Fang, 1996; Paris et al., 1991; Roehler & Duffy, 1991). More specifically, Robertson et al., (1996) maintain that schools as institutions give teachers little time to familiarize themselves with ICT because timetabling does not allow time for such learning. Furthermore, schools are sometimes resistant to change as they feel content with their tested instructional practices (Mumtaz, 2000).

Moreover, a teacher’s role in foreign language centres is mainly to help students acquire certificates which presumably constitute proof for a student’s competence in L2. Therefore, in many cases, teachers are not granted much latitude by the school owners in order to modify, add, reorder or skip activities in the textbook, which is actually the syllabus, as the textbook sequence of activities and the teacher’s guidelines in the teacher’s book are to be followed to the letter. In this case, there might be a “massive gap between theory and practice” (Jenkins, 2007, p. 246) as even teachers who get the opportunities to learn about educational technology and IWBs, are prevented from making links between theory and everyday teaching because of the institutional constraints imposed upon them.

5. Pedagogical implications

Following the discussion above, although not an indictment of IWBs, lack of adequate training was cited as an obstacle for embracing technology. Whether this training was provided by vendors, educational seminars, colleagues or other entities, it seemed inadequate as contributors to this research who had attended formal training or were involved in a self-exploratory approach did not employ IWBs as a transformative device and incorporated the acquired features of IWB into their “existing pedagogical knowledge rather than ICT causing a shift in pedagogy” (Kennewell, 2005, p. 17).

As such, it is clear in this research that teachers need training on using the IWB to shift their pedagogy towards more “student-centred, social and interactive learning” (Türel & Johnson, 2012, p. 391). However, in the context of foreign language centres, schools may not have the time and money to offer their staff training on IWB use. That is
why, teachers should be involved in a self-exploratory approach where IWB successful experiences are shared or co-ordinated by an enthusiastic colleague in their own school with the view to enhancing their competence and understanding of effective IWB instructional practices (Moss et al., 2007; Shenton & Pagett, 2007). Moreover, teachers could take advantage of online support communities which regularly contribute research findings and administer free IWB lessons to promote the use of IWBs in classrooms.

Furthermore, teachers should participate in formal training sessions to enhance their technical competencies and be aware of pedagogical implications in order to reap maximum benefits regarding their students’ learning via IWBs (Türel, 2010). How the aforementioned professional development programmes can be organised is not within the scope of this research. However, some preliminary design considerations can be established.

Based on the research, teachers’ training should be tailored to the needs of teachers (Levy, 2002), with experiential training on ICT skills (Condie & Munro, 2007). Moreover, training on the IWB features must be linked to pedagogical theory and practice (Miller & Glover, 2007). That is why accredited training programmes by trainers who are expert users of IWBs and with a solid pedagogical foundation (Condie & Munro, 2007) could help practitioners reflect on their current pedagogy and realise how IWB technology can support, extend or transform this (Somekh, 2007).

Teachers have the potential to change when they are shown that there is a mismatch between what they would ideally prefer to do and what they do in reality (Khonamri & Salimi, 2010). Thus, only by being trained to recognise how their perceptions and teaching context contribute to their practices and by making them aware of their skills and shortcomings, will teachers be able to improve their instructional approach and reduce this inconsistency (ibid.). Additionally, trainee teachers need to be provided with opportunities to explore IWB techniques in their own teaching context (Graham & Thornley, 2000).

Another implication extrapolated from the research is that within a constructivist instructional design, teachers should involve all students and value their individual contributions in the IWB classroom allowing pupils to come up and use the interactive element of the whiteboard so that technology enhances learning, motivates students and develops their social skills (Candlin & Mercer, 2001). Therefore, teachers should not focus on interacting with the technology itself but rather use it “as another medium (besides themselves) to interact with the class, as well as allowing the class to interact with each other, in mutually developing new teaching and learning strategies” (Beauchamp & Parkinson, 2005, p. 103).

To sum up, the IWB can make effective instruction full of learning opportunities possible provided there is training on the appropriate methodological integration of IWBs adhering to principles of language learning, time to prepare resources instead of ‘slavishly’ espousing available software-recipes for ‘good’ teaching results, the mutual support of colleagues and adequate access to IWBs (Glover & Miller, 2002a; Kennewell & Morgan, 2003). Training in IWB skills and using digital resources is necessary but teachers also need adequate time to familiarize themselves with the new technology and start evaluating their instructional strategies to integrate IWB in their practice.
5.1 Limitations of the study and suggestions for further research

This is a small-scale study since the number of teachers who participated is relatively small compared to the number of teachers employed in foreign language centres. However, the fact that the results of the adopted grading model for the categorisation of teachers described in section 3 fits a normal distribution allows for some initial generalised conclusions to be drawn. Nonetheless, the participation of more respondents could help the researcher explore the issue further and generalise even more on the findings.

Additionally, in order to gain a more comprehensive view of what teachers perceive and do in their classroom practice with regard to the employment of IWBs, further research by means of different research tools such as observations of teaching practice complemented with interviews could increase research credibility in the study of teacher cognition and concentrate on the ‘insider’ view and estimated thoughts of the observed teachers. In this way, practitioners’ self-reported perceptions and practices could be examined to see if they differ from what really happens in the classroom.

Moreover, further exploitation of the questionnaire via more cross-tabulations could identify other variables that may affect teachers’ perceptions or their successful uptake of IWBs. For example, the levels taught and the respondents’ nationality could be examined in relation to the teachers’ final categorisation. Furthermore, future IWB research could focus on the possible variations in the relationships between different modes of IWB use and the resulting interaction patterns across differing content or curriculum areas, and on what constitutes effective training in terms of IWB skill development and teacher pedagogy.

Finally, what needs to be heeded is that since a teacher’s pedagogy is affected by a variety of factors such as personal beliefs, attitudes, technical abilities, access to professional training and the particularities of the teaching context, more empirical and longitudinal research is necessary in order to explore before and after-IWB pedagogies and draw conclusions regarding the pedagogical effect of IWBs.

6. Concluding remarks

The research presented in this paper aimed at exploring teachers’ use and perceptions regarding IWBs in Greek foreign language centres and investigating whether IWBs lead to an educational innovation or to just an optimisation of traditional teaching practices. The key issue emerging from the research is the need for teachers to move further on the continuum of teacher-centred and student-centred teaching approaches towards the direction of learner-centredness within the realm of social constructivism so that the IWB benefits are translated into positive learning outcomes (Higgins et al., 2007). Moreover, training is needed so that knowledge of technology and effective pedagogic approaches are integrated into teachers’ instructional design.

It is a foregone conclusion that more and more practitioners will encompass IWBs as a teaching medium in their daily practice in the following years as IWBs are educational tools which have an immense potential to open up new vistas, promote meaningful interaction, help teachers break away from sterile and ineffective teacher-centred practices, endorse a feeling of student empowerment and achievement as global citizens and generally improve the quality of teaching and learning.
However, in order for IWBs to provide a rich learning environment, teachers should safeguard effective interaction and forge paths for maximum learner participation and engagement with interesting authentic tasks. Therefore, careful scaffolding is needed to “fuse this phenomenon with pedagogy” (Wood & Ashfield, 2008, p. 94) so that the value of IWBs is highlighted and teachers manage to shift from a monolithic ‘supported didactic’ to a multidimensional ‘enhanced interactive’ conception of teaching and pave the way to increased learning experience.

Notes

1. Cronbach’s Alpha estimation method is used as a measure of internal consistency and reliability of a sample of items. Cronbach’s Alpha coefficients are calculated and interpreted based on the rules 0.9 = high level, 0.8= moderate level, 0.7= low level, 0.6= acceptable level and <6= unacceptable level (Murphy & Davidshofer, 1991).
2. The Kolmogorov-Smirnov test is a non-parametric test that can be used to compare two samples or test the validity within the variables of a dataset.
3. A Chi-Square test examines whether there is a significant difference between the expected and the observed frequencies in datasets. It is used to analyse the relationships of key categorical variables.
4. Phenomenology is a method that can provide the investigator with insight, to “understand the phenomena of education by maintaining a view of pedagogy as an expression of the whole, and a view of the experiential situation as the topos [common theme] of real pedagogic acting” (Van Manen, 1990, p. 7).

Acknowledgement

The dissertation research presented in this paper was supervised by Dr Kosmas Vlachos, who the writer would like to thank for his invaluable support and insightful comments.

References


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Appendix – Research Questionnaire

I. PERSONAL INFORMATION (Please, write about your personal and language learning/teaching background to help better interpret and classify your answers) – Click on / mark the appropriate box

1. Gender
   - Male
   - Female

2. Age
   - <25
   - 25-30
   - 31-35
   - 36-40
   - 41-45
   - 46-50
   - >50

3. Nationality (   )

4. Area of residence (   )

5. Teaching Qualifications – Click on / mark ALL boxes that apply
   - Proficiency holder
   - University Degree
   - Master’s Degree
   - PhD in progress
   - PhD
   - Other (Please specify): ____________________

6. Teaching Experience
   - 1-5 years
   - 6-10 years
   - 11-15 years
   - 16-20 years
   - 21-25 years
   - More than 25 years

7. What levels do you currently teach? – Click on / mark ALL that apply
   - Children-Teenagers
     - Pre-junior level
     - Junior level
     - A senior
     - B senior (A1 level)
     - C senior (A2 level)
     - D senior (B1)
     - E senior (C1 level)
     - F senior (C2)
   - Business English
   - Other (Please specify): ____________________

   - Adults
     - A1
     - A2
     - B1
     - B2
     - IELTS / TOEFL
     - C1
     - C2
     - Other (Please specify): ____________________

II. TEACHING EXPERIENCE AND TRAINING WITH INTERACTIVE WHITEBOARDS (IWBs)

8. Teaching experience with IWBs
   - None
   - Less than a year
   - 1-2 years
   - 3-5 years
   - >5 years

9. Type of IWB you have used
   - Active whiteboard
   - A normal whiteboard transformed into interactive with the use of a projector.

10. Available equipment in your teaching situation - Click on / mark ALL that apply
   - No IWBs in my teaching context
   - An IWB in one class
   - An IWB in some classes
   - An IWB in all classes
   - One computer in the classroom
   - Some computers in the classroom but not enough for individual or pair work
   - One computer for every student in the classroom
   - Wi-Fi internet connection
   - Printers
   - Microphone
   - Speakers
   - Camera
   - Other (Please, specify): ____________________

11. How have you learned how to use the IWB? Mark ALL boxes that apply
   - By EFL publishing houses
   - By the IWB vendor
   - By educational seminars
   - By colleagues
   - I am self-taught
   - Other (please specify): ____________________

12. How would you rate your ability to use IWBs?
   - Excellent
   - Good
   - Average
   - Below average
   - Poor
III. YOUR TEACHING PRACTICE REGARDING IWBs

13. You use IWBs in your classroom for your students to practise... - Click on / mark ALL boxes that apply

- Grammar
- Vocabulary
- Listening
- Speaking
- Reading
- Writing
- Other (please specify): ____________________

14. How often do you use IWBs in your classes? - Click on / mark the appropriate box

- a. Every day
- b. Several times a week (3-4 times)
- c. A few times a week (once or twice)
- d. A few days a month
- e. Rarely

15. You use the IWB in your classes to access / do ... - Click on/ mark ALL boxes that apply

- The IWB software of the coursebook used
- Concordances
- The Word Processor
- YouTube
- CD roms
- E-mails
- DVDs
- Blogs
- Grammar exercises on the Internet
- Wikis
- Search engines
- Webquests
- The World Wide Web
- Active Worlds
- Online dictionaries
- Digital storybooks
- Other (Please, specify): ____________________

16. How often do you perform the following when you use IWBs? (Click on / mark the appropriate box)

<table>
<thead>
<tr>
<th>Ways of treating whiteboard features</th>
<th>Always</th>
<th>Often</th>
<th>Seldom</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Writing text on board in a similar way to the traditional use of a blackboard of whiteboard</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2 Using pre-prepared text and graphics</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 Copying and pasting from other software (Word, graphics packages)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 Emphasizing using the tickertape or spotlight function</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5 Storing on flipchart pages for future use</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6 Linking to other pages in the flipchart</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7 Linking to files stored on the computer (e.g. Word, Excel, Powerpoint)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8 Linking to Internet sites</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9 Annotating and modifying using the pen or arrows and lines</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10 Using PowerPoint with the IWB acting as the screen</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11 Employing PowerPoint and annotating slides using IWB</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
12. Using ‘drag and drop’ to move text and graphics around the screen

13. Moving forwards and backwards between pages to create an effective learning sequence

14. Importing digital images and sound clips

15. Using hyperlinks to switch between pages

16. Using hyperlinks to switch between programmes

17. Preparing a library of resources for the IWB

17. How often do you perform the following when using the IWB? - Click on / mark the appropriate box.

<table>
<thead>
<tr>
<th>Teaching practices</th>
<th>Always</th>
<th>Often</th>
<th>Seldom</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I create my own teaching material for the IWB.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>2. I use the IWB software accompanying the coursebook I use.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>3. I share teaching material with colleagues.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>4. I encourage cooperative learning with the IWB.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>5. I use the IWB to present information to the students.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>6. I encourage the active participation of learners.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>7. I write notes on the IWB and then some class discussion follows.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>8. I negotiate and adapt the tasks and activities to suit my students’ needs rather than impose them on the learners.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>9. I share my lesson objectives on the IWB with the class and revisit them at key points of the lesson.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>10. I and my students jointly do activities such as labeling, drawing or constructing graphs on the IWB.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>11. I and my students co-construct arguments and explanations on the IWB.</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>
12. I promote learner autonomy through self-correction and peer assessment using the IWB.
13. I try to train my learners to take responsibility for their own learning using the IWB.

### IV. YOUR PERCEPTIONS REGARDING THE USE OF IWBs

18. Indicate the extent to which you agree or disagree with the following statements - Click on/ mark the appropriate box

<table>
<thead>
<tr>
<th>Teaching practices</th>
<th>Strongly agree</th>
<th>Agree</th>
<th>Normal</th>
<th>Disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 I am in favour of the use of IWBs in English lessons.</td>
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<td>2 The cost of IWBs is high.</td>
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<td>3 The use of IWBs reinforces teacher-centered approaches.</td>
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<td>4 IWBs foster educational change.</td>
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<td>5 IWBs promote interactivity.</td>
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<td>6 IWBs offer greater opportunities to integrate Information Communication Technology (ICT) in lessons while teaching from the front of the class.</td>
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<td>7 IWBs offer increased flexibility and versatility since teachers can draw on and annotate a wide range of web-based resources.</td>
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<td>8 IWBs are a waste of time.</td>
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<td>9 The lesson pace is faster with the use of IWBs.</td>
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<td>10 IWBs minimize the teacher’s role.</td>
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<td>11 IWBs promote the teachers’ organizational skills.</td>
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<td>12 IWBs help teachers save and print what is on the board including any notes made during the lesson, reducing duplication of effort and facilitating revision.</td>
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<td>13 IWBs enable teachers to share and re-use materials, reducing workloads.</td>
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<td>14 IWBs are easy to use, particularly compared with using a computer in whole-class teaching.</td>
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<td>15 IWBs inspire teachers to change their pedagogy and use more technology.</td>
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<td>16 IWBs allocate a passive role to students.</td>
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<td>17 IWBs help focus students’ attention on the large IWB screen.</td>
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<td>18 IWBs are suitable for a wide range of age groups.</td>
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<td>19 IWBs enhance students’ motivation.</td>
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<td>20 IWBs give students greater opportunities for participation and collaboration.</td>
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<td>21 IWBs involve a multimedia/multisensory presentation accommodating different types of learners as teachers can call on a variety of resources to suit particular needs.</td>
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<td>22 IWBs help improve students’ speaking skills</td>
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<td>23 IWBs help improve students’ listening skills.</td>
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<td>24 IWBs help improve students’ reading skills.</td>
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<td>25 IWBs help improve students’ writing skills.</td>
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<td>26 IWBs help raise students’ awareness of L2 cultural elements.</td>
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<td>27 IWBs reduce the need for note taking because users can save and print what appears on the board.</td>
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</tbody>
</table>
IWBs offer students the opportunity to be creative in their presentations to their classmates.

IWBs help students organize, present, justify their work and answer questions on it promoting their cognitive skills.

IWBs help younger children and students with disabilities engage with technology since the use of a keyboard is not required.

IWBs help improve Students' behaviour in class.

The effectiveness of IWBs relies on teacher’s use.

V. POTENTIAL PROBLEMS AND POSSIBLE SOLUTIONS USING IWBS

19. Indicate how much each of the following constitutes an obstacle for you in making more effective use of IWBs - Click on / mark the appropriate box.

<table>
<thead>
<tr>
<th>Teaching practices</th>
<th>Major problem</th>
<th>Minor problem</th>
<th>Not a problem</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of computer literacy</td>
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<td></td>
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<tr>
<td>No access to IWBs</td>
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<tr>
<td>Insufficient access to IWBs</td>
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<tr>
<td>Lack of time to use IWBs as there is a lot of course material to cover</td>
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<tr>
<td>Setting up the board</td>
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<tr>
<td>Lack of time to prepare resources</td>
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<tr>
<td>Lack of Training on how to integrate IWBs in lessons</td>
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<tr>
<td>Selection of equipment</td>
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<tr>
<td>Selection of teaching materials</td>
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<tr>
<td>Logistical problems of situating the board so that the cords are not in the way and students would not trip over them</td>
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<tr>
<td>Lack of Technical support when problems occur</td>
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<td>Inadequate technical support</td>
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<td>Slow internet connection</td>
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<tr>
<td>Cost of equipment</td>
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<tr>
<td>Different IWB makes might not be compatible with available computers</td>
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<tr>
<td>Students' unwillingness to participate</td>
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<tr>
<td>Increased noise levels</td>
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</table>

20. If you face other problems regarding the use of IWBs in your lessons, please specify:

1. 
2. 
3. 
4. 
5. 

21. Possible solutions to overcome the problems for the effective use of IWBs. Please, write a number from 1-5 in the space provided to rank the solutions mentioned below and your own ideas in order of importance (1=more important…5=less important)

   a. Available technical support
   b. Training on computer literacy
   c. Training on the integration of IWBs

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349
d. The use of IWBs should be included in the school timetable
e. Other (please, specify):

VI. GENERAL COMMENTS
22. Which aspect of the IWBs do you like the most?
23. Which aspect of the IWBs do you like the least?
24. Have your original expectations regarding the use of IWBs been met? Why/why not?
25. Please, feel free to make any comments on the use of IWBs in Greek foreign language centers:

Thank you very much

__________________________________________

Sophia Basmatzi (basmasoph@yahoo.com) holds a B.A. in English Language and Literature from the National and Kapodistrian University of Athens and a M.Ed. in Teaching English to Speakers of Other Languages from the Hellenic Open University. She has been working as a teacher of English in Greek Private Foreign language centres for twenty years. Her research interests include educational technology and pedagogy, teaching English to young learners and teenagers, and teacher education.
Investigating normalisation: Do teachers of English in Greece integrate technology in their everyday teaching practice?

Spiros SPIRIS

This article presents the results of a research study conducted in Greece. The study examined 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. The focus was on exploring whether this integration approaches normalisation, i.e., the state in which technology is so embedded in everyday teaching practices that it becomes invisible. The data were collected via questionnaire through which teachers’ practice in the Greek school context as well as their beliefs, regarding the integration of technology, were examined in the light of what constitutes normalisation. Finally, possible obstacles to normalisation were explored and solutions to overcome these obstacles were suggested. The outcomes of the 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.
έχουν γενικά μια θετική στάση απέναντι στην τεχνολογία. Ωστόσο είναι αναγκαίο να γίνουν αλλαγές στη διδακτική πρακτική τους προκειμένου αυτή να επιτευχθεί.

**Key words:** Normalisation; Open CALL; Restricted CALL; Integrated CALL; Technology Integration

1. **Introduction**

The overall aim of this article is to present the findings of a research study conducted with teachers in Greece pertaining to the integration of technology in their teaching practice. The main objective of the study was to examine normalisation, a concept which has not been widely investigated in the Greek school context. Normalisation refers to the state in which technology is truly integrated in everyday teaching practices; in other words, it is used naturally in the teaching process without fear or awe and, thus, becomes invisible. This article begins with a literature review of normalisation. Then it describes the research study and proceeds with the presentation of the main research findings. Finally, the article ends with a discussion of the findings, the limitations of the study and suggestions for further research.

2. **Literature review**

Normalisation is “the stage when a technology is invisible, hardly even recognized as a technology, taken for granted in everyday life” (Bax, 2003: 23). It refers to 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). Normalisation is associated with Integrated CALL (Computer Assisted Language Learning), one of Bax’s three approaches to CALL (see Appendix I for an outline of these approaches), and should display certain characteristics. The first characteristic is that technology is used every day and is a smaller part of every lesson. Moreover, it is simply a tool for learning, adapted to learners’ needs, and used without fear/awe. Within this view, it is not the main determinant of successful teaching and learning; it is simply used, in tandem, with other teaching tools and activities. In other words, it ceases to be an add-on. Instead, it is used for authentic purposes, when it has something to contribute to the learning process. Specifically, students will often interact with other students via the computer in order to conduct activities, which aim at integrated language skills, using a variety of technological applications. The teacher manages and facilitates the process while feedback focuses on stimulating students to think and evaluate their responses. Finally, technology is integrated into the syllabus and present in every classroom, thus signifying a move from the lab to the classroom.

Bax believes that Integrated CALL does not exist yet. It represents “an aim towards which we should be working” (ibid.: 22). According to Bax, teachers are in Open CALL. However, instances of Restricted CALL, particularly regarding attitudes and timetabling, and even Integrated features are present in Open CALL, depending on how teachers integrate technology.
Drawing on Rogers’ (1995) work regarding the Diffusion of Innovations, Bax proposes seven stages of normalisation in CALL. Specifically, when using a technology for the first time, its users react to it in various ways, namely as ‘Early Adopters’, with ‘Ignorance/scepticism’, in a ‘Try once’ mode, in a ‘Try again’ mode, with ‘Fear/awe’, in a ‘Normalising’ mode and, finally, they achieve normalisation (2003: 24-25). In other words, a few teachers will initially adopt a technology out of curiosity, whereas the majority of teachers are sceptical regarding its use. Some try it once and abandon its use as soon as problems occur. However, if encouraged by colleagues who tell them that technology actually works and is very useful, they might try it again. Generally, teachers will experience fear or will be in awe of technology and its potential. Over time technology becomes something natural and eventually invisible.

Bax believes that, in relation to the integration of technology in their teaching, teachers are in the ‘Fear/Awe’ stage. However, the aim should be to achieve normalisation because as he firmly states, “only when CALL is normalised will teachers and learners reap its full benefits” (Chambers & Bax, 2006: 466).

2.1 How to reach normalisation

According to Chambers and Bax (2006), in order to achieve normalisation teachers need to consider “numerous factors” which should be investigated both individually and in relation to how they “interact and operate in real pedagogical contexts” (ibid.: 466-467), taking into account the social, human and cultural aspects of each context. Teachers should, therefore, aim for ‘ecological’ (Tudor, 2003) rather than ‘technological’ solutions. Chambers and Bax (2006) examine these factors by conducting a qualitative research study in two EFL (English as a Foreign Language) settings. They conclude that, in order to achieve normalisation, CALL facilities should be present and ‘ideally’ organised in the classroom. Moreover, teachers should have enough knowledge of computers to feel confident to use them. To this end, technical, but most importantly, pedagogical support should be provided. Teacher training and development in normalisation and the use of ‘authorable’ CALL materials, offered in bottom-up mode can assist in reaching this goal. Finally, CALL needs to be properly integrated into the syllabus (ibid.: 477-478).

However, as each social setting is different, the same rules cannot apply to all. Normalisation will inevitably not occur to the same degree with each type of technology and will not follow the same steps. Therefore, Bax (2011) suggests three steps that will help achieve normalisation. First, a teacher should carry out a Needs Audit in an attempt to determine the value, necessity and usefulness of the technology to be used. This will reduce what Murray and Barnes (1998) call the ‘Wow Factor’. Second, a Learning Plan should be prepared. The main focus should be on learning rather than the learners. Within this view, a teacher should aim at challenging the learners’ beliefs in order to “break away from preconceptions and rise to more critical levels of thinking and analysis” (Bax, 2011: 9).

Third, Bax suggests that a context-sensitive Research Programme should take place. This type of Action Research implies that teachers investigate the factors that enhance or impede normalisation within their specific social and educational settings. By following these three steps, a teacher seeking to implement technology will be able to choose the technology appropriate for his/her aims and educational setting; the technology chosen will, therefore, enhance learning and, consequently, lead to normalisation.
2.2 Research on normalisation

Since 2003 the concept of normalisation has been addressed in various articles and discussions (Jung, 2005; Kern, 2006; Levy & Stockwell, 2006) regarding technology and its role in Foreign Language Education. For instance, Kern (2006: 185) states that “the use of computers should not be framed as a special case but rather as an integral aspect of language learning and language use”. Davies (2005) agrees with this view and believes that an obstacle to normalisation is the “current trend to place Information and Communication Technology (ICT) on a pedestal, as if it is the cure for all ills in education”. Instead, he suggests that the language teacher and learner use everyday tasks, similar to the natural use of technology outside the classroom, such as using e-mail or keeping up with the news.

Egbert (2006) also believes that technology should be “employed where effective”. However, she does not use the term normalisation. She prefers to talk about the ‘End of CALL’. In order to achieve this state, computers in the classroom need to be “truly ubiquitous […] and virtually invisible in that they are accessible the moment they are needed and do not hamper the learning process when they are not”. To support her view, she mentions the example of Australian laptop schools, described in a study by Johnstone (2003). Hubbard (2008) realizes the importance of normalisation for the classroom teacher. However, he does not agree with the need to extinguish CALL as a field, a point made by Bax (2003: 23). That is, CALL will be successfully integrated into language learning once “it ceases to exist as a separate concept and field for discussion”. Taking into consideration the impact of technological change on CALL, Warschauer (2004) examines ten developments that will take place or are taking place in ICT. The tenth development is “the movement of CALL from the language laboratory to the classroom” (ibid.: 5).

Furthermore, Ioannou-Georgiou (2006) introduces a summary of the main issues raised on an online discussion forum about normalisation. Bax also participated in the discussion and offered his insights. Several factors which could contribute to the normalisation of CALL were presented, among which was the recognition that progress “is shaped by the wider economic, social and technological aspects of societies” (ibid.: 384). Within this view, Davies (2005) argues that training can be “the key to success in implementing technology, but this is the budget that is often cut first”.

Constantinides (2011) conducted a survey among Cambridge Certificate in English Language Teaching to Adults (CELTA) tutors in order to explore teacher trainers’ attitudes towards normalisation. The results indicated that trainers displayed negative attitudes regarding the implementation of normalisation. For instance, tutors doubted the usefulness of normalisation and believed that it was not their duty to help promote it. Others felt uncertain as to their own knowledge regarding the issue as well as to the means to implement it.

Moreover, normalisation has been investigated in terms of related technologies. Specifically, Cutrim Schmid (2008) offers a solution to the problem of computer location. She considers the Interactive Whiteboard a tool which helps to “bring the functionality of the computer into the real classroom” (ibid.: 70), as has been the case in the UK and Australia. Along those lines, Bax considers the Interactive Whiteboard “the fundamental feature of a technology which has the potential to be normalised in language learning, namely that it allows integration with the already existing syllabus” (2006: 6). However, the Interactive
Whiteboard alone is not enough to ensure normalisation. The role of the teacher, his/her knowledge of the technology and its use, as well as a focus on pedagogy will be the most significant factors in supporting its integration (Thomas & Cutrim Schmid, 2010).

In an attempt to investigate normalisation in specific contexts, certain authors have conducted research studies. Their focus was mainly on the barriers affecting normalisation. For instance, Ward (2007) made a presentation at the EUROCALL 2007 Conference. She talked about ‘normalising CALL in the primary school context’, and she described a small-scale research study which focused on teaching Irish in primary schools. She discovered certain barriers to normalisation, namely lack of equipment and software, and teachers’ lack of ICT and CALL knowledge, confidence and interest.

Furthermore, He (2010) investigated teachers’ opinions on the normalisation of CALL and presented the factors affecting it in senior high schools in the Republic of China, as part of her Master’s Thesis. She conducted a survey among 340 teachers of English in a specific prefecture of China. The findings indicated that most teachers apprehend the importance and usefulness of computers and regard them as tools for learning. According to He, normalisation of CALL “is on its way and has a potential in Chinese senior high schools” (ibid.: 63). However, the study indicates certain factors affecting normalisation, namely insufficient equipment, inconvenience of booking multimedia classrooms, computer competency, poor teacher training, the teaching methodology used, and learner factors, such as learner differences, interests and motivation.

Finally, Maftoon and Shahini (2012) conducted a survey among fifty in-service teachers in Iran to investigate the inhibitive factors that may have influenced the uptake of CALL and, hence, normalisation. The factors which led to CALL disuse and discouragement are, in order of importance, lack of enough facilities, lack of administrative support, lack of time, perceived ease of use, low mastery, others’ attitude and perceived usefulness.

2.3 Normalisation and the Greek educational system

The current curriculum for the English Language in Greek Education, the 2003 Cross-Thematic Curriculum Framework, does not actually enhance normalisation. In theory, the Curriculum acknowledges the important role technology has in education and its need to be infused into all school subjects, the focus being on Pedagogy. However, no actual guidance is offered to assist teachers in the integration of technology.

In an attempt to promote the integration of technology, the Ministry of Education equipped schools technologically with Interactive Whiteboards and a portable computer lab. As far as training in the use of ICT is concerned, teachers were trained and certified in the acquisition of basic computer literacy skills during 2001-2008 (Pedagogical Institute Website, 2013). Then, in 2010, specialised ICT training and certification started. The aim was, and continues to be, to train teachers in the implementation of ICT in their field of specialization. The focus is on Pedagogy and the use of Web 2.0 tools, educational software, Interactive Whiteboards and the creation of Didactic Scenarios. However, Foreign Language teachers have not yet participated in this training. Finally, a special e-platform is being created for the distance training of teachers (The Training of Teachers for the Implementation of ICT in their teaching Website, 2013).
3. The research study

Normalisation has not been widely investigated in the Greek school context, despite the fact that it leads to positive educational outcomes; that is, it facilitates the teaching process and improves learners’ performance because the focus is on Pedagogy/learners’ needs. Given this paucity of research, the overall aim of the current study, which was conducted for the purposes of an M.Ed. Dissertation, was threefold: (1) to explore the extent to which teachers of English in Greece integrate technology into their teaching practice in the Greek context (State schools-Private schools-Foreign Institutes of Foreign Languages\(^6\)) and at examining whether this integration approaches normalisation; (2) to investigate teachers’ beliefs and attitudes towards normalisation; and (3) to identify the factors impeding normalisation and possible solutions to overcome the barriers to the effective use of ‘Educational Technology’.

The following specific research questions addressed the aims stated above:
- What is the situation in Greece regarding normalisation?
- What are the English teachers’ beliefs and attitudes towards normalisation?
- What are the factors impeding normalisation?
- What are the possible solutions to overcome the barriers to the effective use of ‘Educational Technology’?

3.1 Method

3.1.1 Participants

A total of 147 teachers participated in the research. 117 teachers utilized technology to some extent while 30, despite having attended seminars regarding technology, stated the opposite. In contrast, 24 respondents who had not attended seminars actually incorporated technology in their teaching practice. The participants were recruited through the professional networks of the researcher.

3.1.2 The research instrument

In order to address the research aims a questionnaire was developed by the researcher. This questionnaire (see Appendix II) consisted of ‘Factual’, ‘Behavioral’ and ‘Attitudinal’ questions (Dörnyei, 2003: 8). Specifically, the ‘Factual’ questions (Parts I, II and III-Questions 1-7) aimed at finding out information about the respondents\(^9\) so as to investigate whether there is some kind of correlation between this information and normalisation. ‘Behavioral’ questions sought information about the respondents’ teaching practice as far as Educational Technology is concerned (Part IV-Questions 8-12). The aim was to investigate these practices in the light of Bax’s (2003) criteria regarding normalization.\(^10\) Finally, ‘Attitudinal’ questions attempted to reveal the respondents’ attitudes and beliefs about Educational Technology (Part V-Questions 13-14) as well as their opinions about the potential problems and solutions regarding the use of technology in the classroom (Part VI-Questions 15-16). The intent was to explore teachers’ feelings towards normalisation and compare them to their actual teaching practice, as well as to identify the obstacles to normalisation and suggest solutions relevant in the Greek school context. All variables were selected according to what constitutes ‘Normalisation’.\(^11\)
The main body of the questionnaire contained a variety of closed-ended items, with responses using Likert scales and/or True/False items, multiple-choice questions, rank order items and checklists. In addition, clarification type open-ended questions, asking respondents to add more information in an ‘Other, please specify’ Category, were included. Regarding the issue of internal consistency, Cronbach’s Alpha for variables 12-15 was 0.739).

3.1.3 Procedure

The questionnaire was distributed to teachers of English in Greece, via e-mail. Prior to its administration, the questionnaire was piloted to a small number of teachers to ensure its effectiveness. The researcher invited colleagues, friends as well as teachers who were completing or had completed their Master’s Degree in the Hellenic Open University, to take part in this study.

A cover letter which provided the necessary information about the survey was attached; this cover letter outlined the purpose of the study, identified the teachers who were eligible to participate in the research, that is, English teachers who were familiar with Educational Technology and either applied it or avoided incorporating it in their lessons, and addressed issues of confidentiality.

4. Results

The quantitative data, collected from the questionnaires, were analysed using SPSS 20. It was revealed that the participants were mainly female between 31-40 years of age. In addition, they worked in state schools, had 6-15 years of teaching experience and had completed or were completing their Master’s Degree. Finally, the participants felt they had the knowledge, skills and confidence to use technology in their teaching practice.

Regarding the daily use of technology, only one out of ten teachers utilized technology every day. The majority of teachers (40.8%) rarely used it, while 30 respondents never incorporated it in their lessons.

Furthermore, 97.5% of respondents who did not feel confident with technology were women. Second, postgraduate studies or courses showing alternative ways of implementing technology appeared to influence teachers effectively. For instance, most teachers (62.2%) who were completing their Master’s Degree tended to use various technological applications. On the contrary, the vast majority of respondents who had not attended courses related to technology and its integration in the teaching process preferred to use closed-type questions and ready-made material when using technology. Third, respondents expressed their strong disagreement with the view that the Greek educational system supports the integration of technology; 86.4% of those respondents were state school teachers. State school teachers also felt that the lack of technological equipment hindered the implementation of technology. Specifically, 86.9% of respondents who considered restricted access to the computer lab as a major barrier were state school teachers. Similarly, 74.1% of state school teachers viewed the absence of computers in the classroom as another major barrier.

Finally, in an attempt to investigate how close the teachers in Greece are to normalisation, the researcher allocated points to variables 11a-11f. These variables examine teachers’
practice in the light of Bax’s (2003) criteria regarding his three approaches to CALL. Answers belonging to Restricted CALL were given one point; those belonging to Open CALL received two points, while responses associated with Integrated CALL earned three points (see Appendix III). As the researcher’s intention was not on placing teachers within Bax’s categories but on investigating normalisation, he decided to form six categories. Specifically, teachers who received 6-9 points were placed in the ‘Restricted Minus’ group, while those with 10-11 points fell in the ‘Restricted Plus’ group. Respondents with 12-13 points were positioned in the ‘Open Minus’ category, while those with 14-15 points in the ‘Open Plus’ group. Finally, teachers with 16-17 points fell in the ‘Near Normalisation’ category while those with maximum points (18) were placed in the normalisation group. The results indicated that the majority of teachers belonged to the ‘Open Plus’ group. However, the number of teachers constituting the ‘Near Normalisation’ group was quite high (see Table 1).

<table>
<thead>
<tr>
<th>Category</th>
<th>Number of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normalisation’ group</td>
<td>2 respondents</td>
</tr>
<tr>
<td>‘Near Normalisation’ group</td>
<td>31 respondents</td>
</tr>
<tr>
<td>‘Open Plus’ group</td>
<td>45 respondents</td>
</tr>
<tr>
<td>‘Open Minus’ group</td>
<td>24 respondents</td>
</tr>
<tr>
<td>‘Restricted Plus’ group</td>
<td>15 respondents</td>
</tr>
<tr>
<td>‘Restricted Minus’ group</td>
<td>0 respondents</td>
</tr>
</tbody>
</table>

*Table 1. Placing respondents into groups*

5. Discussion

This study has revealed information regarding the issue of normalisation in Greece. Each of the research questions posed will be discussed below in turn, and in the light of the findings.

5.1 What is the situation in Greece regarding normalisation?

The findings indicated that the majority of respondents were part of the ‘Open Plus’ group. This implies that the teachers were indeed in Open CALL, as Bax (2003) firmly believes. However, there seems to be a tendency towards normalisation, as becomes apparent by the number of respondents constituting the ‘Near Normalisation’ category. Furthermore, it becomes evident that the teachers were no longer in the ‘Fear/Awe’ stage, as Bax states, regarding his seven stages of normalisation in CALL which examine users’ reactions to technology. The teachers appeared to be in the sixth stage, that is, ‘Normalising’. Moreover, even though the majority of teachers still use simulations/games when implementing technology (see Appendix IV, Variable 11b), teaching practices gradually appear to be changing. These practices progressively comply with Bax’s criteria of what constitutes normalisation. Thus, technology is becoming a tool which is implemented only when it can enhance the learning process.

However, the frequency with which teachers used technology indicated that certain things still need to be done. The lack of equipment at the moment is needed might justify why teachers rarely use technology. This problem might be compensated by the state’s efforts to equip schools technologically.
Nevertheless, equipping classrooms with CALL facilities will not suffice. Further steps are required to reach normalisation. According to Chambers and Bax (2006), the integration of CALL into the syllabus/curriculum might help. Another step is training. Teachers need training regarding computer literacy skills and pedagogy. The majority of teachers had attended seminars regarding basic ICT skills and most reported they used these skills to some extent. However, to reach normalisation pedagogical support is mandatory. Specialised ICT training can help in this direction. It should not focus on offering ready-made scenarios to teachers to use regardless of their teaching context. Instead, it should aim at providing teachers with the knowledge and skills to use technology according to their teaching situation and their learners’ needs. There is no official information regarding the participation of Foreign Language teachers in this training though.

Moreover, progress is influenced by the economic, social, political, scientific and technological aspects of societies (Bax, 2011; Ioannou-Georgiou, 2006). This might further impede normalisation as, due to the economic situation in Greece, other issues are given priority. According to Davies (2005), training “is the budget that is often cut first”. Distance learning/E-learning might offer a solution since it is more affordable, flexible, convenient and effective (Barron, 1999) than conventional training.

Nevertheless, the main factor which can ensure normalisation is the teacher himself/herself. A teacher should first carry out a Needs Audit to determine the necessity of a technology. Then he/she should prepare a Learning Plan to successfully integrate technology. Finally, he/she should carry out Action Research to investigate normalisation in his/her educational setting (Bax, 2011). These steps might help bring normalisation closer.

5.2 What are the English teachers’ beliefs and attitudes towards normalisation?

The teachers generally had a favorable attitude towards normalisation. Specifically, they believed the use of technology in the classroom should be considered as a natural part of the teaching process, and it should be similar to how people utilize it in their everyday lives. Furthermore, they regarded technology as simply one of the many resources available to the teacher which can help students become active constructors of knowledge. It is the teacher’s responsibility to choose the technological application that best caters for his/her learners’ needs.

However, the teachers appeared indecisive about its implementation in their lessons. For instance, they were uncertain whether technology should be the main component or a small part of every lesson. Moreover, they felt confused regarding the way it should actually be used in the lesson. Finally, teachers believed that the Greek educational system does not support the integration of technology in the classroom.

It is generally difficult to change adults’ beliefs and attitudes. As Tillema (1995: 312) points out, change cannot occur by “mere presentation of information”. She suggests “challenging beliefs or expectations” so that adults realize the need to alter their teaching practices. Training done in a “bottom-up” manner, that is, initiated by the trainee, (Woodward, 1991: 147) can help in this direction. Teachers’ favourable attitude towards normalisation is definitely an advantage. More effort should be placed on altering educators’ views about the state’s initiatives regarding normalisation. Only then can training lead to teacher development.13
5.3 What are the factors impeding normalisation?

The respondents identified the factors which, they believe, impede normalisation. They considered the lack of or the insufficient number of technological equipment as the most important barriers to the effective use of technology. Specifically, the lack of computers in the classroom, restricted access to the computer lab, inoperable computers, inadequate technical support and the presence of too many students in the classroom were regarded as major impediments. Finally, insufficient software, the fact that students become boisterous when using the computer, the insufficient number of available computers and slow internet connection were viewed as minor barriers.

These impediments to normalisation are similar to those revealed in previously-conducted studies (He, 2010; Maftoon & Shahini, 2012; Ward, 2007). The major difference regards teachers’ ICT knowledge. This can be justified by the fact the present study focused on teachers familiar with ICT.

5.4 What are the possible solutions to overcome the barriers to the effective use of ‘Educational Technology’?

The respondents offered solutions which might help overcome the above-mentioned barriers. These solutions are in line with Chambers and Bax’s (2006) suggestions. Specifically, the vast majority of teachers (89%) were in favor of more training in the integration of technology. However, for training to be effective, it should not be “one-off” (Woodward, 1991: 147). Moreover, it should be “bottom-up” and it should focus on pedagogy and on teacher development. Other solutions suggested by educators were the placement of technology, regarding the teaching of English, in the school timetable and the provision of technical support. Moreover, further use of the Interactive Whiteboard, unrestricted access to the computer lab and the teacher using his/her laptop are viewed as other ways of overcoming the impediments to normalisation (see Appendix IV, Variable 16a).

Apart from these suggestions and the solutions presented in answer to the first research question, there are other ways to ensure the effective integration of ICT into the teaching practice, and, therefore, normalisation. Simply introducing technology in the classroom will not suffice. It should follow a “coherent educational approach” (Donnelly, 2005: 157). Donnelly suggests projects and Problem-based Learning, i.e. projects which focus on a problem presented to students, as they provide “a natural setting for infusing learning technology” into the classroom. These enquiry approaches can help create a learning environment where students become active constructors of knowledge focusing on “real world issues and practices”. New technologies, such as WebQuests and Web 2.0 tools, can facilitate this process.

What remains undeniable though is that teachers still need specialized training to become acquainted with these approaches. Therefore, training and each teacher’s personal efforts can help achieve normalisation.

6. Limitations of the Research

The findings of this study have provided useful insights regarding technology and its implementation by teachers of English in Greece as well as on the issue of normalisation.
However, there were certain limitations that should be mentioned. The questionnaire was mainly administered to colleagues, recruited through the professional networks of the researcher which may compromise the generalisability of the findings. Moreover, the researcher could have observed several of these teachers to establish whether their responses correspond with their actions, as questionnaires have certain drawbacks regarding the respondents’ attitude when completed (i.e. the ‘halo effect’, ‘acquiescence bias’ and ‘fatigue’),14 (Dörnyei, 2003). This was not possible though due to lack of time, the fact that certain respondents lived far away from the researcher or even the respondents’ reluctance to be observed. Instead, the researcher attempted to verify the consistency of the responses by wording questions to examine the same issue differently. The results revealed no inconsistency.

6.1 Suggestions for Further Research

This research was a first attempt to investigate the issue of normalisation in the Greek school context. In order to achieve more generalisable results certain actions can be taken. A larger scale research project covering all areas in Greece would definitely be useful. It would offer more insights regarding the answers to these or further research questions. Furthermore, research investigating teachers working in Foreign Institutes of Foreign Languages or private schools can provide information regarding their views and practice in these work areas. Moreover, further research should be conducted at schools which have been equipped technologically or after the participation of Foreign Language teachers in specialised ICT training in order to investigate whether changes have occurred. Finally, ‘triangulation’ (Dörnyei, 2003), achieved via observation of teacher practice, would foster more reliable results.

7. Conclusion

In conclusion, it appears that teachers in Greece generally have a favorable attitude towards normalisation. They realize that technology is simply a tool, i.e one of the many resources available to the teacher, which can enhance the learning process. Moreover, they believe its use in the classroom should be considered as a natural part of the teaching process and it should be similar to how people utilize it in their everyday lives. Consequently, their reactions to technology contradict Bax’s belief that teachers are in the ‘Fear/Awe’ stage; they appear to be in a ‘Normalising’ stage. Furthermore, as far as their teaching practice is concerned, the research findings indicated that the majority of respondents constitute the ‘Open Plus’ group. Therefore, there seems to be an agreement with Bax’s view that teachers are in Open CALL. However, there appears to be a tendency towards normalisation.

Finally, teachers identified a number of obstacles to normalisation, namely lack of technological equipment, and offered solutions. The vast majority of teachers requested more training in the integration of technology as they appeared indecisive about its implementation in their lessons. Specialised ICT training and E-learning might be possible ways of enhancing normalisation.

However, in order to ensure normalisation, each teacher should personally deal with this issue. Teachers should consider their teaching context and conduct a Needs Audit, prepare a Learning Plan and, finally, carry out Action Research. Consequently, teachers will be able to choose the technology appropriate for their aims and educational setting. Then technology
can become integrated via projects conducted through the use of WebQuests and Web 2.0 tools.

These measures along with teachers’ favourable attitude and personal actions might help reach normalisation. This way, “computers can finally achieve their proper place and true potential in the classroom” (Bax, 2003: 27).

Notes

1. Rogers (1995) offers five adopter categories, i.e. ‘Innovator: Venturesome’, ‘Early Adopters: Respectable’, ‘Early Majority: Deliberate’, ‘Late Majority: Skeptical’ and ‘Laggards: Traditional’. Innovators are always eager to experiment with new ideas. Early Adopters judiciously make decisions regarding an innovation, using the data provided by innovators, before adopting it. They are considered ‘opinion leaders’. The Early Majority group deliberates before accepting an innovation. However, this group usually adopts it before the average member of society. On the contrary, the Late Majority group is skeptical about an innovation and adopts it after the average member of society.

2. According to Tudor (2003: 1), an ecological perspective “focuses attention on the subjective reality which various aspects of the teaching-learning process assume for participants and on the dynamic interaction between methodology and context”.

3. According to Murray and Barnes (1998), the ‘Wow Factor’ refers to the situation when users of a technology are dazzled by the novelty and attractiveness of the innovation and do not consider the learning dimension.

4. Some of these factors were appropriate hardware and software, easy access to technology, top-down policy regarding the use of computers, technical and pedagogical support, the integration of technology into the syllabus and teacher training.

5. Lower Secondary schools were provided with Interactive Whiteboards. However, these Whiteboards were intended to be used by Class B students only. Moreover, 800 Day Primary Schools under a Revised Programme were equipped with a portable computer lab.

6. The Programme was entitled: «The training of teachers in the utilization of ICT in education». It consisted of 48 hours of training.

7. This programme consists of 96 hours of training. It concerns all Primary school teachers and Secondary school teachers who teach Greek Language and Literature, Mathematics, Science, ICT and Foreign Languages. In 2014 teachers who teach the aforementioned subjects (with the exception of Foreign Language teachers) can participate in its new blended-training form. In this form, teachers do most work online and are required to be present in two meetings. A further goal is to educate teachers of all specializations.

8. Foreign Institutes of Foreign Languages (also known as ‘Frontisteria’ in Greece) are private institutes which teach students foreign languages. Students usually attend them in the afternoons. Both parents and students believe that state schools cannot help students learn a foreign language and succeed in language exams. Therefore, they turn to these Institutes as they are exam-centred and offer more teaching hours.
9. Specifically, questions regarding demographic characteristics, i.e. age and gender, occupation, academic qualifications, ICT knowledge and technological equipment available at their schools.

10. For instance, Question 9 examines the frequency with which technology is used; the aim is to determine whether technology is employed on a daily basis as normalisation requires. Moreover, Question 11 explores teachers’ practices in the light of Bax’s (2003) three approaches to CALL.

11. For instance, the variables regarding barriers and solutions were selected according to research conducted by Chambers and Bax (2006), He (2010) and Maftoon & Shahini (2012) or by ideas discussed in Ioannou-Georgiou (2006). Davies’ (2005) view of using tasks similar to the natural use of technology outside the classroom is examined in Variable 13.10. Finally, the use of authorable material is investigated in Variables 13.13 and 13.14.

12. The course referred to in this variable is the AGG66 Module. AGG66, entitled ‘Educational Technology in English Language Teaching’ is one of the Modules of the Postgraduate Course ‘Master’s in Education in Teaching English to Speakers of Other Languages’ offered by the Hellenic Open University.

13. According to Lange (1990: 250), teacher development describes “a process of continual intellectual, experiential, and attitude growth of teachers”. Its purpose is “for the teacher to generate change through increasing or shifting awareness” (Freeman, 1989: 40).

14. The ‘halo effect’ refers to the tendency of respondents to overgeneralize, ‘acquiescence bias’ to the tendency to agree with almost everything, and ‘fatigue’ to the tendency to respond hastily or inaccurately due to boredom (Dörnyei, 2003).

References


Davies, G. (2005). ‘Computer Assisted Language Learning: Where are we now and where are we going?’ Keynote paper originally presented at the UCALL Conference, University of Ulster, Coleraine, June 2005, at


He, B. (2010). ‘Factors affecting normalization of call in senior high schools in the ethnic areas of the People’s Republic of China.’ A Thesis Submitted in Partial Fulfillment of The Requirements for the Degree of Master of Arts in English Language Studies, Suranaree University of Technology.


### APPENDICES

#### APPENDIX I – Table 1: Restricted, Open and Integrated CALL: an outline

<table>
<thead>
<tr>
<th>Approach to CALL</th>
<th>Content</th>
<th>Type of task</th>
<th>Type of student activity</th>
<th>Type of feedback</th>
<th>Teacher roles</th>
<th>Teacher attitudes</th>
<th>Position in curriculum</th>
<th>Position in lesson</th>
<th>Physical position of computer</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Restricted CALL</strong></td>
<td>Language system</td>
<td>Closed drills, Quizzes</td>
<td>Text reconstruction, Answering closed questions, Minimal interaction with other students</td>
<td>Correct/incorrect</td>
<td>Monitor</td>
<td>Exaggerated fear and/or awe</td>
<td>Not integrated into syllabus, optional extra technology precedes syllabus and learner needs</td>
<td>Whole CALL lesson</td>
<td>Separate computer lab</td>
</tr>
<tr>
<td><strong>Open CALL</strong></td>
<td>System and skills</td>
<td>Simulations, Games, CMC</td>
<td>Interacting with the computer, Occasional interaction with other students</td>
<td>Focus of linguistic skills development, Open, flexible</td>
<td>Monitor/facilitator</td>
<td>Exaggerated fear and/or awe</td>
<td>Toy, Not integrated into syllabus, optional extra technology precedes syllabus and learner needs</td>
<td>Whole CALL lesson</td>
<td>Separate lab—perhaps devoted to languages</td>
</tr>
<tr>
<td><strong>Integrated CALL</strong></td>
<td>Integrated language skills work, Mixed skills and system, Any, as appropriate to the immediate needs</td>
<td>CMC, WP e-mail</td>
<td>Frequent interaction with other students, Some interaction with computer through the lesson</td>
<td>Interpreting, evaluating, commenting, stimulating thought</td>
<td>Facilitator/Manager</td>
<td>Normal part of teaching-normalised</td>
<td>Tool for learning, Normalised integrated into syllabus, adapted to learners’ needs, Analysis of needs and context precedes decisions about technology</td>
<td>Smaller part of every lesson</td>
<td>In every classroom, on every desk, in every bag</td>
</tr>
</tbody>
</table>

(From Bax, 2003: 21)
APPENDIX II – The Questionnaire

EXPLORING THE ISSUE OF NORMALISATION

I) PERSONAL INFORMATION
*Please click on the appropriate box.*

1. Age
   - □ 21-30
   - □ 31-40
   - □ 41-50
   - □ ≥ 51

2. Gender
   - □ Male
   - □ Female

3. Current Employment
   - □ State schools
   - □ Private schools
   - □ Frontisteria
   - □ Other (Please specify: )

4. Years of Teaching Experience
   - □ 1-5
   - □ 6-10
   - □ 11-15
   - □ 16-20
   - □ 21-25
   - □ ≥ 26

5. Academic Qualifications
   - □ University Degree
   - □ Master’s Degree in progress
   - □ Master’s Degree
   - □ PhD in progress
   - □ PhD
   - □ Other (Please specify: )

II) YOUR PERSONAL ‘EDUCATIONAL TECHNOLOGY’ HISTORY
*Please click on the appropriate box.*

6a. Have you attended any courses/seminars related to ‘Educational Technology’?
   - □ Yes
   - □ No

6b. If yes, please specify:
   [For example, ICT Certification (Επιμόρφωση στις ΤΠΕ-Α Επίπεδο)/
    ECDL Certification/The ‘Educational Technology’ Module (AGG 66) of the Master’s
    Programme offered by the Hellenic Open University/Seminars conducted by private
    organizations etc.]
   - □ (1)
   - □ (2)
   - □ (3)
   - □ (4)
   - □ (5)

III) EQUIPMENT AVAILABLE IN YOUR TEACHING CONTEXT
*Please click on the appropriate box/boxes*

7. Which of the following equipment is available at your school?
   - □ a) A computer lab with one computer for each student.
   - □ b) A computer lab with shared computers.
   - □ c) One computer for each student in the classroom.
   - □ d) Computers in the classroom but not enough for individual/pair work.
   - □ e) One computer in the classroom.
   - □ f) An Interactive Whiteboard in some classes.
   - □ g) An Interactive Whiteboard in all classes.
   - □ h) Wi-Fi internet connection.
   - □ i) Internet connection only in the computer lab.
   - □ j) No technological equipment in the classroom.
   - □ k) Other (Please specify: )
IV) YOUR TEACHING PRACTICE REGARDING ‘EDUCATIONAL TECHNOLOGY’

A) GENERALLY SPEAKING

Please click on the appropriate box/boxes.

8. If you use computers in your lessons you use:
   □ a) the classroom computer
   □ b) your own laptop
   □ c) the classroom Interactive Whiteboard
   □ d) the computer lab
   □ e) students’ laptops
   □ f) Other (Please specify: )
   □ g) I don’t use computers in my lessons.

9. How often do you use technology in your lessons?
   □ a) Every day
   □ b) Several days a week (3-4 days)
   □ c) A few days a week (1-2 days)
   □ d) Rarely (1-3 days a month)
   □ e) Never

10a. If you use or have used technology, which of the following technological applications have you applied so far in your lessons?

   (Please click on the appropriate box/boxes)

   □ Word Processor □ Wida
   □ PowerPoint □ Hot Potatoes
   □ E-mail □ WebQuests
   □ Blogs □ Digital Storybooks
   □ Wikis □ Skype
   □ Concordancers □ Active Worlds
   □ Online Dictionaries □ World Wide Web
   □ Search Engines □ Interactive Whiteboards
   □ YouTube □ Educational Games
   □ Google Docs □ Cd Roms
   □ Other (Please specify: )

10b. Please write down, in order of preference, the five technological applications that you mainly use.

   (1)
   (2)
   (3)
   (4)
   (5)

If you do NOT use technology in your lessons, please go to Section V

B) SPECIFICALLY

Please click on the appropriate box which best applies to your situation.

11. When you use technology in your lessons:
   a) you mainly focus on:
      □ language (grammar and vocabulary)
both language and skills
- integrated language skills work

**b)** the tasks you assign your students mainly consist of:
- multiple choice and/or true-false types of activity
- activities using the word processor, e-mail or other technological applications
- simulations and/or games

**c)** your students:
- occasionally interact with other students while interacting with the computer
- frequently interact with other students through the computer
- mainly interact with the computer answering closed questions

**d)** the type of feedback provided mainly focuses on:
- offering correct/incorrect answers
- helping students develop their language and skills
- stimulating students to think and evaluate their responses

**e)** your role is mainly that of a:
- manager (you set the tasks, time, resources etc.) and facilitator (you offer help when requested)
- monitor (you watch the process) and facilitator (you offer help when requested)
- monitor (you watch the process)

**f)** technology:
- is the main component of your lesson
- is the only component around which you base your lesson
- is a smaller part of every lesson

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12. Please click on the appropriate box to indicate how often you perform the following when you use technology in your lessons:

<table>
<thead>
<tr>
<th></th>
<th>Always</th>
<th>Most of the time</th>
<th>Rarely</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>First I choose the technological application and then I prepare the tasks to accompany it.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>I first think about what I want to teach and then choose a technological application that can help.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>I use technology in order to offer students more practice on what was previously taught in the lesson.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>I use technology as a tool to help students learn.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>I use technology in order to check what learners have learnt in the lesson.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>I use technology towards the end of my lesson in order to allow students to relax.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>I use technology in order to make students feel more interested in the lesson.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>I create my own materials when I use a technological application.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>I use ready-made materials when I use a technological application.</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
I take into consideration my learners’ needs when I choose a technological application.

Lessons using technology take place in the computer lab.

Lessons using technology take place in the classroom.

V) YOUR ATTITUDES AND PERSONAL BELIEFS REGARDING ‘EDUCATIONAL TECHNOLOGY’

13. Please click on the appropriate box to indicate the extent to which you agree or disagree with the following statements.

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Students should consider the use of technology in the classroom as a natural part of the teaching process.</td>
<td></td>
<td></td>
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<tr>
<td>2</td>
<td>Technology alone can improve our lessons.</td>
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<tr>
<td>3</td>
<td>Technology should be the main component of every lesson.</td>
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<tr>
<td>4</td>
<td>Technology should be used in every lesson but only when it can help our learners improve their learning.</td>
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<tr>
<td>5</td>
<td>Technology should mainly be used for revision purposes.</td>
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<tr>
<td>6</td>
<td>Technology should mainly be used at the beginning to attract our students’ attention.</td>
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<tr>
<td>7</td>
<td>Technology should mainly be used at the end to allow students to relax and have fun.</td>
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<tr>
<td>8</td>
<td>We should choose the technological application that will raise our students’ interest.</td>
<td></td>
<td></td>
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<tr>
<td>9</td>
<td>We should choose the technological application that best caters for our learners’ needs.</td>
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<tr>
<td>10</td>
<td>The use of technology in the classroom should be similar to how people use it outside the classroom in their everyday lives.</td>
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<tr>
<td>11</td>
<td>Technology is simply one of the many resources available to teachers.</td>
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<td></td>
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<tr>
<td>12</td>
<td>The appropriate type of software is the main determinant of success</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>13</td>
<td>Ready-made material should be provided to teachers.</td>
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<tr>
<td>14</td>
<td>We should create our own material according to our learners needs.</td>
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<td></td>
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<tr>
<td>15</td>
<td>Technology should be integrated in the school timetable as far as the teaching of English is concerned.</td>
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<tr>
<td>16</td>
<td>Computers should be present in our classrooms.</td>
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<tr>
<td>17</td>
<td>During a lesson we should frequently switch from computer activities to non-computer activities.</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
The Greek educational system supports the integration of technology in classrooms.

The teaching institution (state schools-private schools-frontisteria) we work in is a major factor responsible for the effective use of technology.

Technology can help students become active constructors of knowledge.

14. Please click on the appropriate box to indicate the degree to which the following statements represent you.

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>True</th>
<th>Not True</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I have the knowledge and skills to use technology.</td>
<td></td>
<td></td>
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<tr>
<td>2</td>
<td>I feel confident when using technology.</td>
<td></td>
<td></td>
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<td>3</td>
<td>I am worried because problems might occur when using technology (e.g. slow internet connection, the computer might crash).</td>
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<tr>
<td>4</td>
<td>I feel nervous because my students know more than I do regarding technology.</td>
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<tr>
<td>5</td>
<td>I need more training regarding the use of technology in the classroom.</td>
<td></td>
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<tr>
<td>6</td>
<td>I cannot use technology if access to the computer lab is difficult.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

VI) POTENTIAL PROBLEMS AND POSSIBLE SOLUTIONS REGARDING THE USE OF ‘EDUCATIONAL TECHNOLOGY’ IN THE CLASSROOM

15a. Please click on the appropriate box to indicate the extent to which the following constitute a barrier to the use of technology in your lessons:

<table>
<thead>
<tr>
<th></th>
<th></th>
<th>Major Barrier</th>
<th>Minor Barrier</th>
<th>Not a Barrier</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Access to the computer lab is restricted.</td>
<td></td>
<td></td>
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<tr>
<td>2</td>
<td>There are not enough computers for all students.</td>
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<tr>
<td>3</td>
<td>There are no computers in my classroom.</td>
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<tr>
<td>4</td>
<td>There is insufficient software/ready-made material available at school.</td>
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<tr>
<td>5</td>
<td>The internet connection in my school is slow.</td>
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<tr>
<td>6</td>
<td>Most computers in the computer lab do not work.</td>
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<tr>
<td>7</td>
<td>Students become noisy when they are in front of the computer.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>There are too many students in my classroom.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
9. There is a lot of course material to cover so there is no time to use technology.

10. Preparing for lessons using technology is time-consuming.

11. There is inadequate technical support when problems occur.

12. I am not really sure how to integrate technology in my lessons.

15b. If you face other barriers regarding the use of technology in your lessons, please specify:
   (1)
   (2)
   (3)
   (4)
   (5)

16a. Which of the following solutions can help overcome the barriers to the effective use of ‘Educational Technology’?

*Please click on the appropriate box/boxes*

- The teacher should bring his/her own laptop.  
- Students should have their own laptops.
- The teacher should make more use of the Interactive Whiteboard.
- The teacher should demand access to the computer lab.
- The teacher should assign homework which will require students to use technology at home.
- The use of technology, regarding the teaching of English, should be placed in the school timetable.
- Technical support should be readily offered.
- More training in the integration of technology (e.g. Specialised ICT Certification [Επιμόρφωση στις ΤΠΕ-Β Επίπεδο]) should take place.
- Other (Please specify: )

16b. Please write down, in order of importance, the **three** solutions that might best help overcome the above-mentioned barriers to the effective use of ‘Educational Technology’.

(1)
(2)
(3)
APPENDIX III—Points given to Bax’s approaches

RESTRICTED CALL (1 point)
- focus on language (grammar and vocabulary)
- tasks mainly consist of multiple choice and/or true-false types of activity
- students mainly interact with the computer answering closed questions
- feedback mainly focuses on offering correct/incorrect answers
- teacher role: monitor
- technology is the only component around which you base your lesson

OPEN CALL (2 points)
- focus on both language and skills
- tasks mainly consist of simulations and/or games
- students occasionally interact with other students while interacting with the computer
- feedback mainly focuses on helping students develop their language and skills
- teacher role: monitor and facilitator
- technology is the main component of your lesson

INTEGRATED CALL (3 points)
- focus on integrated language skills work
- tasks mainly consist of activities using the word processor, e-mail or other technological applications
- students frequently interact with other students through the computer
- feedback mainly focuses on stimulating students to think and evaluate their responses
- teacher role: manager and facilitator
- technology is a smaller part of every lesson

Spiros Spiris (spirisspiros@hotmail.com) holds a B.A. in English Language and Literature from the University of Athens and an M.Ed. in Teaching English as a Foreign Language from the Hellenic Open University. He is a teacher of English in Greek state secondary schools. His research interests include educational technology and teacher education.