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DEVELOPING CREATIVITY AND COOPERATION THROUGH INFORMATION AND COMMUNICATIONS TECHNOLOGIES IN TEACHING ENGLISH AS A FOREIGN LANGUAGE

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1. INTRODUCTION

The following dissertation aims at the exploration of how Information and Communication Technologies (ICTs) can contribute to creativity and cooperation in the English as a Foreign Language classroom. In order to get a better and wider understanding of creativity and cooperation within the field of education, section 5.1 of the present study addresses the question of the competences and skills necessary for the 21st century learner. General frameworks of reference and terminology definitions are presented. It defines both terms by drawing on relevant research, describes their importance in the context of education, and provides an overview of how creativity and cooperation can be fostered in the classroom. Section 5.2, “Foreign Language teaching integrating information and Communication Technologies”, presents a brief historical overview of language learning and computers, and draws on the advantages and disadvantages of ICTs for learning and language learning. The ground of communicative language teaching is sketched and place where collaboration and creativity linger, defined. Fostering these two skills in the English as a foreign language classroom demands a new pedagogy, a new communicative approach, in which technology may act as a catalyst of change. Then, through the analysis of relevant literature, the procedures by which ICTs can facilitate creativity and cooperation are described. Projects developing creativity and cooperation through ICTs are reviewed, especially the research on digital storytelling, digital comic books and google maps tours. Finally, in the last part of section 5.2, pedagogical implications for classroom practice are elicited given the previous research.

The third part, section 5.3, takes a more practical approach by proposing three instructional ideas, three unit plans, where creativity, cooperation and technology go hand in hand with communicative language practices. All three instructional ideas draw briefly on relevant classroom research literature and are fully described in terms of objectives, methodology, resources and assessment.

In section 6, conclusions and final remarks are drawn. A narrative of my own personal experience as teacher integrating creative and cooperative digital technologies in the ESL classroom in compulsory secondary education in Spain is outlined.

2. JUSTIFYING ACADEMIC AND PERSONAL INTEREST OF THE TOPIC

In the last couple of years, the use of technology in my EFL classroom has grown exponentially. This has been the result of a number of interests: (1) to spark a new motivation for classroom activities and projects; (2) to provide accessibility to materials and

resources otherwise lost in conventional settings; (3) to open a window in the classroom to our technologically-mediated world; (4) to help develop learners' digital competence; and, finally, (4) out of personal interest. Underlying these interests is the innermost desire to place creativity and collaborative work as an integral part of foreign language teaching methodology. Furthermore, I strongly believe, with Sahlberg (2009), that creativity should have a central place in lifelong learning policies. Being creative (i.e. being inventive and adaptive) means understanding language not only as a means of communication but as a tool for expression, transformation and change. Such quality is usually underscored in current education policies and curricula but insufficiently tackled in classroom practice.

It is my intention to focus mostly on the use of ICTs within the framework of secondary education. That means, I shall be exploring this otherwise broad field by fencing out those approaches or theories that do not consider "physical" classroom environments or remain outside formal education settings.

The present master's thesis project aims at providing a sound literature review of creativity and cooperation, ICTs and TEFL, and gathering some of the most relevant practices and tools believed to enhance communication, creativity and cooperation in the language classroom. In so doing, this project is to be considered as the ground for a later development of a fully-integrated ICTs program within the EFL curriculum in secondary education under a creative and cooperative standpoint.

3. OBJECTIVES

Main goal of the Project:

- To analyze how Information and Communication Technologies (ICTs) can contribute to cooperation and creativity within a communicative approach to teaching English as a Foreign Language.

Specific objectives:

- To present how creativity and cooperation have been conceptualized in the education literature as necessary skills for the 21st century learner.
- To research the benefits of ICTs for learning, language learning, creativity and cooperation in the ESL classroom.
- To propose instructional ideas promoting communication, creativity and cooperation in the ESL classroom through the use of ICTs.

4. METHODOLOGY

The following dissertation is two-folded in its methodological approach. On the one hand, it presents a literature review on the contribution of Information and Communications Technologies to creativity and cooperation within the English as a Foreign Language Classroom. It aims at providing an objective and thorough summary, and a critical examination of the scientific literature and relevant research in the field of education in regards to creativity, cooperation, and language teaching using technology. On the other hand, this project, in its final section, draws some pedagogical implications and proposes a set of instructional ideas, underpinned by the theoretical research from previous sections, to be implemented in the secondary EFL classroom in Spain.

5. LITERATURE REVIEW

5.1. Creativity and Cooperation, skills for the 21st century learner

As globalization advances steadily, our societies face new challenges and demand new skills from their citizens. Technological developments are shaping our contexts so rapidly and continuously that adaptability has become an asset if you are to take part in today's productive work context. Computers have led to the automation of many job tasks that were formerly carried out by human force (many of these tasks being "routine" tasks where no major skills were involved) and in return have placed new challenging demands on the individuals, especially those skills requiring dealing with unpredictability, collaboration and foresight. This, no doubt, has been accentuated by the increasingly global labor market, which has meant greater job competition and more intellectually demanding jobs. Companies are radically changing how the work gets done by transforming traditional work structures into more dynamic entities where collaboration and interaction, self-management and personal responsibility have become key. Such work teams have become increasingly global in nature and thus decentralized in many instances.

From the technological developments to the economic and global interconnectedness, we are witnesses to the opening of gaps and cracks at the heart of our societies. These events have forced governments and international institutions to rethink current education practices in order to provide new and innovative policies that guarantee social progress and strengthen economic development.

The European Union, under recommendation of the European Parliament and of the Council of Europe, recognized this gap and embarked in the transformation of education and training throughout Europe. This issue, a priority of the Europe 2020 agenda, lies at the

core of a greater and soon-to-come transformation of society that shall deliver the knowledge and skills that are necessary for social and economic prosperity, employment and full participation in society. It seems evident that education systems must adapt to ensure that future generations are endowed with the skills and competences to be expected over the next decade. Redressing education to cater to the increasing demands of Member States thus means providing access to quality education in accordance to society's new needs, ensuring equality for those groups who are in need of support to fulfill their educational potential by promoting apprenticeships and fostering entrepreneurship, and increasing foreign language skills. With these goals in mind, the "Rethinking Education Initiative" was launched in Europe in 2012 as part of the strategic-framework of the European Commission supporting language learning and linguistic diversity.

This is not a unique phenomenon to Europe, however. By the turn of 20th century, the Organisation for Economic Co-operation and Development (OECD) had already set forth its Programme for International Student Assessment (PISA), with "the aim of monitoring the extent to which students near the end of compulsory schooling have acquired the knowledge and skills essential for full participation in society" (OECD, 2005: 3) and have already thus recognized the importance of going beyond any particular countries' curricula to look ahead and outline the new skills for a global context.

5.1.1. Competences and new skills

What exactly are these competences? And what are these so-called "new skills for the 21st century" that seem so necessary in our time? It has become common practice among authors, specialized groups and institutions to argue in favor of a reworking of education, from goals to practices, to fit with contemporary demands where new abilities and higher order thinking skills are given a prominent role (P21, 2007; Sahlberg, 2009). We are talking about higher order cognitive processes such as critical thinking, creative problem solving, curiosity, and adaptability, and other more social or group related, such as cooperation and communication.

5.1.1.1. 21st century skills

"21st Century Skills" has become an umbrella term, almost a kind of empty signifier encompassing a great number of cognitive and social abilities, but whose definition and delimitation varies according to authors and organizations. However, they are not new to education, they have been covertly or tangently present at times, openly tackled at others. It seems that these "new skills" have acquired a new specificity and new context, a new

time, and are key to develop adaptability and innovation to be desired in the present-day and demanded in the coming years.

Howard Gardner in *Five Minds for the Future* (2005) outlines the specific cognitive abilities to be sought after in the years ahead. According to him, current educational practices are not designed to respond to the challenges brought about by the new digital era and globalization. They have become obsolete. Nevertheless, it is education the major force that needs to take up this challenge and shape the minds of learners to face these unprecedented circumstances. Gardner considers that “the kind of minds that we should cultivate in the future” (Gardner, 2008:10) are five:

- The Disciplinary Mind: the mastery of major schools of thought, including science, mathematics, and history, and of at least one professional craft.
- The Synthesizing Mind: the ability to integrate ideas from different disciplines or spheres into a coherent whole and to communicate that integration to others.
- The Creating Mind: the capacity to uncover and clarify new problems, questions, and phenomena.
- The Respectful Mind: awareness of and appreciation for differences among human beings and human groups.
- The Ethical Mind: fulfillment of one’s responsibilities as a worker and as a citizen.

With similar outlook but different terminology and conceptual architecture, the *Partnership for the 21st Century Skills* (henceforth P21), a US organization bringing together the business community, education leaders, and policy makers, whose goal is to “to serve as a catalyst to position 21st century readiness at the center of US K12 education” (P21, 2007: 1) has provided a widespread reference framework to the debate of these skills.

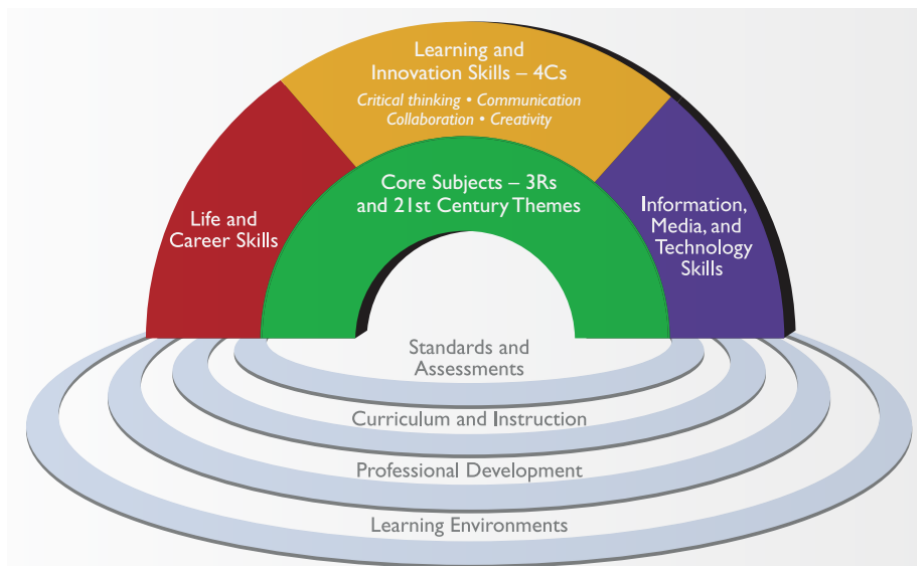


Figure 1. 21st Century Student Outcomes and Support Systems (P21, 2007:1)

At the center of the image (green rainbow arch) are Core subjects, the themes essential to student success, namely: Reading or language arts, World languages, Arts, Mathematics, Economics, Science, Geography, History, Government and Civics. At the same time, interdisciplinary themes (21st Century Themes) such as Global Awareness, Financial and Entrepreneurial Literacy, Civic Literacy, Health Literacy and Environmental Literacy, are to be interwoven into core subjects.

Core subjects and 21st Century Themes are flanked by the outer arch of the rainbow: Life and Career Skills, Learning and Innovation Skills, and Information, Media, and Technology. The first makes reference to the “ability to navigate the complex life and work environments in the globally competitive information age requires students to pay rigorous attention to developing adequate life and career skills” (P21, 2007: 6), such as: Flexibility and Adaptability; Initiative and Self-Direction; Social and Cross-Cultural Skills; Productivity and Accountability; Leadership and Responsibility. The second, Learning and Innovation Skills, refer to those skills necessary for success in today’s complex work and life environments: Creativity and Innovation; Critical Thinking and Problem Solving; Communication and Collaboration. Finally, the third section of the outer arch of the rainbow graph, Information and Technology skills, tackle media-driven abilities to deal with abundant information, rapid changes in technology and distant communication and collaboration.

In addition to this framework of content knowledge and skill, the Partnership advocates for a series of “support systems” (pool at bottom of rainbow graph) to guarantee students’ mastery of 21st century skills. These include: 21st Century Standards; Assessments of 21st

Century Skills; 21st Century Curriculum and Instruction; 21st Century Professional Development; 21st Century Learning Environments.

5.1.1.2. *Competences*

The **Organization for Economic Cooperation and Development** (OECD) key competences came about as a result of the Program for International Student Assessment launched in 1997. The driving force behind this assessment was well aware that for learners' to be successful in life, a wider range of competences that exceeded students' knowledge and skills in the areas of reading, mathematics, science and problem solving, was at play. A definition and framework was necessary then to improve future assessment and guide education policies towards the development of these key competences.

According to the OECD, "a competency is more than just knowledge and skills. It involves the ability to meet complex demands, by drawing on and mobilizing psychosocial resources (including skills and attitudes) in a particular context" (OECD, 2005: 4). OECD's conceptual framework classifies key competences in three broad categories: Using tools interactively, Interacting in homogeneous groups, and Acting autonomously. The first refers to the mastery of socio-cultural tools for interacting with knowledge (information, language, symbols and texts) as well as physical tools such as computers. It means keeping updated with technologies, conducting active dialogue with the world and adapting knowledge and skills according to ones needs. The second competence category is required for individuals to learn, live, co-operate and relate well with others. In other contexts, they are referred to as "social competences" or "social skills". The third category, Acting Autonomously, does not mean individualism or social isolation; it means to be able to develop independently an identity and make personal choices that reflect a personal value system. It translates into acts of will such as decision, choice and action (OECD, 2005).

Along these lines, the "Recommendation 2006/962/EC of the European Parliament and of the Council of the European Union of 18 December 2006 on Key Competences for Lifelong Learning" proposed a Framework of key competences to be fully integrated into the infrastructure and policies of Member States. This reference tool justified this framework upon the fact that fostering key competences added a surplus value for the social fabric, job market, and an active and participatory society. The annex of such document, *Key Competences for Lifelong Learning – A European Framework*, defines competences as "as a combination of knowledge, skills and attitudes appropriate to the context. Key competences are those which all individuals need for personal fulfilment and development,

active citizenship, social inclusion and employment” (EC, 2007:3). The Reference Framework sets out eight key competences:

- Communication in the mother tongue which is “the ability to express and interpret concepts, thoughts, feelings, facts and opinions in both oral and written form (listening, speaking, reading and writing) and to interact linguistically in an appropriate and creative way in a full range of societal and cultural contexts” (EC, 2007:4);
- Communication in foreign languages which, sharing the main skill dimension of the skill above, is “based on the ability to understand, express and interpret concepts, thoughts, feelings, facts and opinions in both oral and written form (listening, speaking, reading and writing) in an appropriate range of societal and cultural contexts (in education and training, work, home and leisure) according to one’s wants or needs” (EC, 2007:5). It also calls for mediation and intercultural understanding;
- Mathematical competence and basic competences in science and technology. Mathematical competence is “the ability to develop and apply mathematical thinking in order to solve a range of problems in everyday situations” (EC, 2007:6), whereas the basic competence in science and technology refer to the “ability and willingness to use the body of knowledge and methodology employed to explain the natural world, in order to identify questions and to draw evidence-based conclusions” (EC, 2007:6);
- Digital competence. It involves the confident and critical use of Information Society Technology (IST) for work, leisure and communication, based on basic ICT skill;
- Learning to learn, “the ability to pursue and persist in learning, to organize one’s own learning, including through effective management of time and information, both individually and in groups. This competence includes awareness of one’s learning process and needs, identifying available opportunities, and the ability to overcome obstacles in order to learn successfully” (EC, 2007:8);
- Social and civic competences, which include “personal, interpersonal and intercultural competence and cover all forms of behavior that equip individuals to participate in an effective and constructive way in social and working life, and particularly in increasingly diverse societies, and to resolve conflict where necessary” (EC, 2007:9);

- Sense of initiative and entrepreneurship, “the ability to turn ideas into action. It involves creativity, innovation and risk-taking, as well as the ability to plan and manage projects in order to achieve objectives” (EC, 2007:11);
- Cultural awareness and expression, which involves the “appreciation of the importance of the creative expression of ideas, experiences and emotions in a range of media, including music, performing arts, literature, and the visual arts” (EC, 2007:12);

Since then, across Europe, the adoption of the broad concept of key competences has met a number of variations in content and terminology according to country and context, ranging from “core competences”, to “basic” or “key skills”. It is common practice in Europe to use both terms, competence and skill, as synonyms. It seems however that competence prevails in Europe and “skill”, on the other side of the Atlantic. For the purposes of this project, whenever the term “competence” is used, it will strictly make reference to one of the eight competences of the European Framework. For the rest of cases, “skills” will be favored, meaning, broadly speaking: the abilities to do an activity or job well.

Two of the crucial skills that are to prepare students for the future are, in our opinion, creativity and cooperation. The Partnership for 21st Century Skills considers them “Learning and Innovation Skills” to be fostered extensively and intensively in the classroom. They are to be imbricated thoroughly in core subjects and, among innovation, critical thinking and communication, become a *leit motif* behind all learning experience. The EU Framework of Key Competences does not explicitly consider them as competences in themselves, they are rather skills, abilities, “themes” (as they are sometimes referred as), intertwined in the very fabric of the competence framework and whose role is to be encouraged.

5.1.2. Creativity

5.1.3.1. What is creativity?

Creativity has traditionally been seen as an unconscious act in the hands of a few, mostly artists and dreamers, a sort of letting go of social constraints that directly connects to an endless well of unconscious material. Quite the contrary, serious creative achievements rely on knowledge, control of materials, command of ideas and of emotional flow. Creativity is a fundamental human activity, ingrained in all of us, not just terrain for the naturally gifted. Creative thinking is possible in all areas of human endeavor, whether it be the arts, sciences, at work or in any area of daily life. We are all capable of creative acts and when

the boost of creativity is experienced, it can have an enormous impact on self-esteem and on overall sense of accomplishment.

Creativity means thinking or behaving imaginatively towards the achievement of an objective or towards the production of a work that “is both novel (i.e., original, unexpected) and appropriate (i.e., useful, adaptive concerning task constraints)” (Sternberg and Lubart, 1999: 3). According to P. Howard-Jones (2008: 6) “creativity is most easily considered in terms of outcomes: e.g. dramatic improvisations and artistic artefacts, but also innovative business ideas and scientific breakthroughs. Such outcomes usually share the two common characteristics of being both original and appropriate.” Novelty and purpose define the creative act.

Creative learning will therefore be “any learning which involves understanding and new awareness, which allows the learner to go beyond notional acquisition, and focuses on thinking skills” (Banaji, Perrotta and Cranmer, 2010: 19) and the production of novelty. This experience is intrinsically opposite to reproductive and repetitive tasks that have dominated education for decades. Innovative teaching is thus the other side of the same coin. It is “the process leading to creative learning, the implementation of new methods, tools and contents which could benefit learners and their creative potential” (Banaji, Perrotta and Cranmer, 2010: 19).

5.1.3.2. Why is it important?

Jackson, Oliver, Shaw and Wisdom (2006) consider that it is important to develop student creativity for personal, social and economic reasons. On a personal level, improving creativity is likely to boost the learner’s satisfaction, well-being, and self-identity, as well as opening up the potential for professional development. On a social and global perspective, as individuals explore their own potential, they may become conscious of the problems around them and see new possibilities of change and improvement. Action may result of this desire to bridge the gap of reality and the desire for change. Finally, from an economic standpoint, as mentioned in previous sections, increased global competition and the growth of information societies and new technologies, new forms of work have resulted in demanding for new kinds of worker who draw on creative and out-of-the-box thinking to produce new products or services.

5.1.3.3. How can we foster creativity in schools?

In spite of the fact that creativity is currently in vogue in education agendas, it is often claimed that schools actually kill creativity (Robinson, 2006). Some of the reasons employed in support of this view is that formal education is fairly rigid in its academic structures,

determined by a pre-ordered set of content, driven by the quest of the correct answer and memorization, still tied to tradition, predisposed to logical-type of mind, and thus undifferentiated in its instructional approach.

While not taking away some of the truth behind this view, winds are blowing in favor of an ambitious and far-reaching school. It is the time for an innovative teaching practice that is able to identify the learner's creative capacities and foster them through use of environment and strategy: Creativity can be "taught" (NACCCE, 1999: 11-12). These two, environment and strategy, are generally acknowledged in the literature of creativity, when properly oriented, to be leading to creativity. Feldhusen and Treffinger (1980) provided several recommendations if we are to cultivate a "creative classroom":

- Support and reinforce unusual ideas and responses of students.
- Use failure as positive feedback.
- Adapt to student interests.
- Allow time for students to think and develop ideas in the classroom.
- Create a climate of mutual respect and acceptance.
- Be aware of a multi-faceted creativity.
- Encourage divergent learning activities.
- Listen and laugh with students. Create a warm and supportive environment.
- Allow students to take part in the decision-making process.
- Let everyone get involved.

For Forgays and Forgays (1992) the learner's level of involvement and engagement in any particular task is paramount for its completion; nonetheless, an uncritical and relaxed environment is most helpful for generative and creative thinking. This affirmation is in accordance with recent discoveries in the field of neuroscience that say that when we are under stress or perceive danger, our brain turns on the warning system causing changes in the brain and body to deal with them. Stress hormones are then released which in turn limit the functions of the hippocampus, an area in close relation to memory and learning. When this emotional state is called upon, students shut down and can only be appealed to their logical-analytical brain. Students must feel safe, relaxed and emotionally confident to be able to learn and remember meaningfully (Sousa, 2010).

Howard-Jones (2014) acknowledges that there is still a long way in bringing together the insights brought about by scientific research in neuroscience regarding creativity and the design and implementation of classroom practice when informed by these insights. In any case, in general terms, in need of further evidence, Howard-Jones devises some strategies that, together with a nurturing environment, open the way for creative thinking:

- The creative process requires a movement from two different modes of thinking: analytical and generative. The former can benefit from extrinsic rewards such as praise or recognition; however, the latter, is prone to more intrinsic motivations such as fascination and curiosity.
- Generative thinking can be achieved through a process of visualization of changes in context. In so doing our brain activity resembles that associated with real experience. It can be supported by strategies that demand the making of unusual connections or seeing similarities in unexpected elements.
- Creative thinking can feel like “a step in the dark” in comparison with other practices based on repetition of the same. Thus, in order to avoid fixation and provide reassurance, some level of constrain and guidance is desirable, even necessary.

5.1.3. Cooperation

5.1.3.1. What is coopeartion?

R. Oxford (1997) distinguishes three strands of communication in the FL classroom: cooperative learning, collaborative learning, and interaction. According to Oxford, echoing Olsen and Kagan (1992: 8), *cooperative learning* is defined as “group learning activity organized so that learning is dependent on the socially structured exchange of information between learners in groups and in which each learner is held accountable for his or her own learning and is motivated to increase the learning of others”. In contrast, *collaborative learning* bears witness to the nature of knowledge as a social construction. Finally, *interaction* is described as “involving teachers, learners, and others acting upon each other and consciously or unconsciously interpreting (i.e. giving meaning to) those actions” (Oxford, 1997: 444).

The instructional ideas proposed in the last section of this dissertation draw on cooperative learning in a multi-step lesson planning. Cooperative learning must be differentiated from mere group work as it places a positive interdependence in the group, individual and group accountability, promotes interaction, develops interpersonal and group social skills, and

carry group processing with an eye to self-evaluation and improvement (Johnson *et al.*, 2008)

5.1.3.2. *Why is it important?*

In broad terms cooperation is the action of working together with someone to produce something. It is considered to be a learning and innovative skill by P21 which involves the ability to work effectively and respectfully in diverse environments, the flexibility and willingness to compromise in order to accomplish a common goal, and a shared responsibility for common work (P21, 2007:4).

5.1.3.3. *How can we foster cooperation in the classroom?*

Communicative language learning has always treasured interaction, pair and group work, as bearers of the communicative act; however, task-based (TBL) and project-based (PBL; cf. *problem-based learning*) approaches to language learning are the forerunners of cooperative work in the English as foreign language classroom. Task-based learning focuses on the completion of a task, more than any particular grammatical or content area, and language is the instrument of communication whose purpose is helping complete the proposed task. Language use is meaningful as it is placed in authentic communicative situations. Tasks may range from simple activities in which learners agree on ordering, sorting, listing or brainstorming, for example, agreeing on a list of three of the most important discoveries in the 20th century, to more complex tasks involving role plays, for instance.

In contrast, PBL is a student-centered pedagogy in which students gain knowledge and skills over longer periods of time, frequently a term or whole academic year, to investigate and respond to a question, situation, problem or challenge by creating presentations or products to share what they have learned. It is thus more ambitious than TBL in the sense that it is wider in scope, length and goal.

Nevertheless, the difference between tasks and projects proves blurry in practice since there is considerable degree of overlapping between the two. Following R. Ribé (1997), who distinguishes between 1st generation tasks (mono-nuclear focus-on-form units), 2nd generation (research frameworks aiming at cognitive development) and 3rd generation tasks (creative frameworks aiming at attitudinal change), it can be argued convincingly that 2nd and 3rd generation tasks share considerable affinity with projects as such, and 1st generation tasks correspond to the standard definition of task in current literature (Ribé, 1997: 89).

5.2. Foreign Language teaching integrating Information and Communication Technologies.

5.2.1. Language Learning and Computers

5.2.1.1. From CALL to MALL: A historical perspective of language learning and computers

Today the presence of technology is so pervasive, so ingrained in our daily lives that it seems nearly impossible to carry out the simplest ordinary task without resorting to it. Computers and mobile devices are shaping at an incredible fast pace how we perceive ourselves, relate to each other, and see the world around us. They have shaken our very foundations of knowledge, identity and socialization.

Language learning theories and teaching have not remained indifferent to the unstoppable influx of computers and have explored the possibilities of this medium as early as the 1960s. Computers or, more broadly, digital technologies, employed in education have been shaped by the learning theories of their time but at the same time have helped transform our very understanding of teaching and learning.

During the 1960s most of the research on computers and language learning was still confined to universities and science departments, where the PLATO project, initiated at the University of Illinois, became an important landmark in the early development of what was to be called Computer Assisted Language Learning (CALL) (Marty, 1981). During the 1960s through to mid-1970s, CALL replicated the teaching techniques of structural linguistics and the audio-lingual method, a behaviorist model of language learning based on habit formation, where drill-and-practice was norm (Richards and Rodgers, 1986). With the advent and fast development of personal computers in the 1980s, CALL was already leaving behind the “behavioral” outlook and taking on a more communicative approach where meaning and use predominated over form and structure. It is during this period of time when organizations such as CALICO, the Computer-Assisted Language Consortium, was created in the USA and when “The First International CALL Conference” took place in Hasselt, Belgium, in the spring of 1985. This “communicative CALL”, in Warschauer and Healey’s words, “corresponded to cognitive theories which stressed that learning was a process of discovery, expression, and development” (1998: 57) rather than a manipulation of self-enclosed prefabricated language utterances. It was based upon the principles of meaningful practice, use of target language, implicit grammar instruction, modelling, and low-anxiety environment (Underwood, 1984).

By the mid-1980s and early 1990s, a major reassessment of communicative language teaching and practice was already taking place, shifting the place of interest from a cognitive view of communicative teaching to a social or socio-cognitive view where focus was on authentic language use in context and meaning form experience. In the mid-90s, CDs and the Internet appeared. Textbooks began to include CDs and CD-ROMs as support materials and software companies started developing language applications, such as *The Rosetta Stone*. Nevertheless, materials developed were still based on textbooks and traditional activities and offered limited interaction and collaboration among students. The Web was still a place to search information rather than a place to share and communicate.

As the popularity of the Internet increased in the later years of the 20th century, greater number of services such as emails, mailing lists, forums, news groups, etc. became available. Eventually, that “multimedia CALL” progressively gave in to the new forms of communication, interaction and sharing that the Internet brought about and rapidly popularized.

According to Warschauer and Healey (1998), it was during this time when a full integration of the various learning skills (e.g. listening, speaking, reading, and writing) and an immersion of the learners in authentic environments blossomed. Task-based, project-based, and content-based approaches were a direct result of these new approaches. Technology followed suit and took up the challenge of developing models which could integrate the various aspects of the language learning process. This is what Warschauer and Healey (1998: 58) termed “integrative CALL” which placed the “multimedia networked computer” at the heart of this integrative CALL. Both computer-mediated communication and the Internet could facilitate an integrative approach where creative and authentic communication were at the core of the course.

Over the last two decades, the tremendous growth in the use of mobile phones and specially the advent of powerful devices, such as smartphones and tablets, have revolutionized how we access, share and consume information. The particular possibilities of mobile devices, such as portability, anytime-anywhere accessibility, cost-efficiency, the bridging of informal and formal learning, personalized learning (Sharples, Sánchez, Milrad, and Vavoula, 2009; Melhuish and Falloon, 2010; Kraut, 2013) are currently explored by mobile-assisted language learning (MALL).

Such transformations have deeply affected the ecology of learning. Teachers and learners are becoming bi-literate in communication and learning. They are becoming producers (of software, content, knowledge, etc.) and consumers by merging their verbal literacy skills

with their newly learned technological skills; i.e. 21st century teachers and learners have become *prosumers* (producers and consumers) in a bi-literate knowledge-driven world (Komoski, 2007).

5.2.1.2. *The benefits of ICTs for learning and language learning*

Throughout Europe, educational stakeholders understand that the present-day and future contribution of Information and Communications Technologies (ICT) towards the realization of preferential educational targets of the Europe 2020 agenda is capital. In fact, together with basic skills of language, literacy and numeracy, information and communication technologies are considered an indispensable foundation for learning. Furthermore, ICT is seen as a “key enabler of creativity and innovation” in education and training. According to a number of organizations ranging from the P21 to the US Department of Education or the OECD using technology in writing, research and analysis can enhance student competences, including skills such as problem solving, creativity, communication and collaboration, to name a few (Moeller and Reitzes, 2011).

Studies have shown that technology can have positive effects on student learning (Asselin and Moayeri, 2011; Knapp and Glenn, 1996) and present “unprecedented freedoms and levels of access” (Tacchi, 2004, p.91). The *ICT Impact Report 2006* (Balanskat, Blamire and Kefala, 2006) attested the impact of ICT in school in Europe by drawing on 17 studies across Europe. As stated in the report, the vast majority of studies confirmed positive benefits of ICT for learning in varied areas that range from motivation and concentration, to creative skills and collaborative work. Similar results are indicated by Higgins, Xiao and Katsipataki (2012).

Fisher, Higgins and Loveless (2006) consider that the benefits computer technologies provide in supporting learning can be described in “clusters” of purposeful activity, namely: knowledge building; distributed cognition; community and communication; and engagement:

Knowledge building	• adapting and developing ideas modelling • representing understanding in multimodal and dynamic ways
Distributed cognition	• accessing resources • finding things out • writing, composing and presenting with mediating artefacts and tools
Community and communication	• exchanging and sharing communication

	• extending the context of activity • extending the participating community at local and global levels
Engagement	• exploring and playing • acknowledging risk and uncertainty • working with different dimensions of interactivity • responding to immediacy

**Table 1 Clusters of purposeful activities with digital technologies for learning
(Fisher, Higgins and Loveless 2006)**

Jonassen, Peck and Wilson (1999) underscore some key benefits of ICTs for foreign language learning particularly. First, ICT can provide language learners with the possibility of using language in meaningful ways in authentic contexts. The internet brings *access to the use of current and authentic materials*, which is motivating. Second, ICTs in the language classroom can allow *communication, cooperation and collaboration* with one's peers. There is a myriad of language learning projects around the globe using ICTs tools whose goal is get in touch, exchange information and experiences, collaborate on projects, etc., thus widening the cultural and knowledge outlook into an experiential process through a language learning perspective. Students can write, read, speak, listen and share experiences through a second language imbued with meaning. Third, a major benefit of ICTs in blended language learning is the opportunity teachers are given to *tutor and monitor their students' progress more closely and effectively*. Thanks to a growing number of tools, teachers can address individual needs and offer personalized guidance to learners. The use of several media (audio, video, presentations, etc.) help language learners with different learning styles to assimilate content and develop skills. For instance, *Khan Academy*, an online non-profit educational organization, provides thousands of free educational resources and a web-based exercise system that generates problems for students based on skill level and performance. This platform not only allows students to work individually on content through tests, assignment and videos, but it also helps teachers to monitor and assess individual student's strengths and needs "in real time".

A forth benefit, concomitant with the third although not explicitly mentioned by Jonassen, Peck and Wilson (1999), can be drawn: *students become active participants of their own learning experience*. Instead of being recipients of information, students using technology become active users, responsible of their own progress (Moeller and Reitzes, 2011).

Technology-mediated instruction have shown positive results in foreign language instruction for vocabulary acquisition as learners come across information through multiple channels and thus recall information better (Chun and Payne, 2004; Jones and Plass,

2002). This view is supported by dual coding theory as described by Paivio (1986). Li and Dell-Jones' research (2014) illustrates how wiki-based collaborative writing in ESL and EFL contexts enabled students to engage in the negotiation of meaning and writing tasks, and contribute to language production. González Bueno (1998) analyzed the effectiveness of using e-mail as a tool to promote writing in foreign language learning in and out of the classroom, and demonstrated that learners using e-mail generated greater amount of language production, displayed a higher level language accuracy, language functions and language use. Liaw (1997) examined the effects of computer books on student conversation skills and concluded that computer books allowed meaningful foreign language discussions.

5.2.1.3. A word of caution on the use of digital technologies in education

At this point it is important to draw on Hubbard (2009) who points out interestingly that these supposed benefits do not necessarily lead to a direct improvement of language, but rather to the improvement of the learning conditions in some way, whether it be learning efficiency, learning effectiveness, access, convenience, motivation or institutional efficiency. It seems that throughout the large abundance of CALL and MLearning, there is a general tendency to claim that there has been an improvement in the language competence through CALL; however, the real improvement has been in the learning conditions. Not only is Hubbard cautious when talking about improvement, he even points out that this technological "assistance" at times may even hinder progress in language learning. CALL initiatives do not necessarily entail the achievement of desired learning goals (Hubbard, 2009:2).

Along these lines of argumentation, Bottino (2003) argues that the large amounts of money spent in technologies have not led to a much-desired pedagogical change. He claims that schools have crammed new technologies in their structures, rather than allowing the new technology to develop a new educational model in accordance to the possibilities of the medium. In this sense, interactive whiteboards have become widely available in compulsory education, especially in the ESL classroom, but in many occasions they are merely used as projection boards, a more convenient type of blackboard. Thus, according to Bottino, the provision of ICTs infrastructure and training does not necessarily result in "effective pedagogical use of technology in schools." Similarly, Olson (2000) considers that ICTs implementation in schools throughout Europe, and especially the UK, is highly politicized and does not attend to the culture of classroom practice and the key role of the teacher in effecting change. He proposes that innovators "engage in conversations with teachers about their work culture, the technologies that sustain it and the implications of new approaches for those technologies" (2000: 6).

Macaro, Handley, and Walter, (2012) claim, after an exhaustive literature review of technology in primary and secondary teaching of English as an L2 in the first decade of the 21st century, that CALL “has not yielded clear or sufficient evidence of its effectiveness” (2012:24); in other words, research evidence provided by the literature is still inconclusive and merits further investigation.

5.2.2. Communicative Language Teaching

English Language learning and teaching have undergone major changes in the last three decades, parting from away from traditional approaches such as Grammar-Translation and Audiolingualism to Communicative Language Teaching (CLT), where interaction, collaboration and negotiation of meaning is at the center of student learning. The goal of the communicative approach in language teaching is “the teaching of the *communicative competence*” (Richards, 2006: 2). Following this notion, classroom activities and student learning are organized around real life communication (e.g., giving instructions, asking for permission, etc.) which are imbued with meaning, interaction and intention.

It seems that CLT has grown in scope and is at ease accommodating multiple and varied perspectives around the globe. Jacobs and Farrell (2003) claim that in fact there has been a major shift in the CLT paradigm in the last decades that has led in broad terms to eight major changes in approaches to language teaching:

- Learner autonomy;
- The social nature of learning;
- Curricular integration;
- Focus on meaning;
- Diversity;
- Thinking skills;
- Alternative assessment;
- Teachers as co-learners.

If effective communication is the desired goal, the contextualization of engaging and authentic activities and the interaction with other students in the target language are paramount towards its achievement. This is perhaps where the communicative approach to second-language acquisition converges around the constructivist paradigm (Crawford, 2003).

5.2.2.1. *A constructivist outlook to Communicative Language Teaching*

Constructivism claims that all knowledge and meaning arises through a process of active construction from our experiences, rather than by a process of mere acquisition. Humans construct their own understanding and knowledge of the world through experience and reflection on experience. Whenever we encounter the new, our previous experiences and ideas try to reconcile it, match it with what is known, either by producing new knowledge or by discarding it as irrelevant. The role of peer interaction in the knowledge construction process is key since the cognitive conflict arising from the interaction allows new knowledge. Knowledge does not reside internally in a person but it is instead constructed through interaction within the discourse community. In the same way, words do not possess meaning in themselves, but rather, their meaning is produced within the community. "Literacy events should be experienced by learners as collaborative social activities with goals embedded in natural settings, and not as isolated and decontextualized events" (Angeli and Cunningham, 1998: 82).

Two important implications for teaching are to be elicited from this constructive knowledge. First, if we come to terms with new learning situations with knowledge gained from previous experiences, then, all learning must be based on prior knowledge and provide the environment to exploit the inconsistencies of what is known and what is yet unknown. Second, if learning is an active construction rather than a reproduction of a series of facts, students are to be placed at the center of the process and the teacher, becomes a facilitator, a provider of tools such as problem-solving and inquiry-based learning activities with which learners propose and test ideas and draw conclusions all of them set in a collaborative learning environment (Hoover, 1996).

5.2.2.2. *Cooperative Learning and Creativity*

Infused by empirical research, there is a growing recognition of the potential superiority of student-centered and cooperative models of learning when computer use is involved (Meskill, 1999). Group-based learning thus have the potential to foster learning and innovation skills, such as creativity, in English language learners, especially when groups engage in collaborative work.

Cooperative learning is an umbrella term encompassing a variety of approaches and methodologies in which learners engage in a common task in which each individual depends on and is accountable to each other. To cooperate means that learners, peers and teachers work together toward the achievement of a common goal. It is a process of shared creation, of group experience. Collaborative tasks allow independent work too but individual

work is ultimately tied to and valued by the group and learning community. The success of one student helps other to be successful too.

The opportunities for collaboration, constructive discourse interaction around creation spaces through the use of ICTs are diverse. This shared learning experience provides students with opportunities to engage in discussion, negotiate meaning, take responsibility for their own learning; thus, planting the seed of critical thinking skills. According to Johnson and Johnson (1986), there is persuasive evidence that cooperative teams achieve at higher levels of thought, and retain information longer, and provide a wide range of creative solutions than students who work quietly as individuals.

5.2.3. Developing Creativity and cooperation through the use of ICTs

5.2.3.1. ICTs contributing to creativity and cooperation

Research shows that creativity, higher order thinking skills and problem solving among learners can be developed through the use of ICTs (Dale, 2008; Kangas, 2010; Elliot, 2009; Loveless, 2002; Tacchi, 2004). Loveless (2002) developed a framework to identify and describe the range of creative activities supported by digital technologies, namely:

- Physical and virtual learning environments
- Developing ideas
- Making connections
- Creating and making
- Collaboration
- Communication and evaluation

These categories intertwine and interplay with each other, so are not mutually exclusive. Even though, these categories are obviously present in other non-technologically mediated practices, what calls for a new creative space is the distinctive features of digital technologies, a broader term Loveless favors instead of ICTs: “provisionality, interactivity, capacity, range, speed and automatic functions which enables users to do things that could not be done as effectively, or at all, using other tools” (2002: 4).

Research undertaken by Dale (2008), within the performing arts subjects at the *University of Wolverhampton*, found that the iPod is a powerful tool for developing creativity within the learning and teaching environment. Kangas’ pilot study (2010) with children indicates that the integration of digital learning environments intertwined with curriculum-based learning fosters collaborative work, creativity and imagination. Parker (1999) suggests that

technology enables students to produce highly creative ways of organizing and delivering information for multiple audiences.

5.2.3.2. Projects developing creativity and cooperation through ICTs

Digital Storytelling

Obari and Lambacher (2012) carried out research with 60 first-year university students from Japan reenrolled in an undergraduate course in English Writing and Communication. They met once per week for 90 minutes in a CALL laboratory during two consecutive 15-week semesters. Students were exposed to a blended-learning environment incorporating m-learning. They produced an individual digital story of their class summaries with the purpose of developing their speaking and pronunciation skills, and then a second digital narrative in group introducing famous UNESCO World Heritage Sites. Obari and Lambacher's year-long research showed how m-learning had a positive impact in improving the learners' listening, presentation and writing skills in English.

G. Stanley (2013), who has researched the integration of technology into secondary English language teaching, highlights the use of digital storytelling by Vicky Saumell's EFL class in Argentina. According to Saumell, digital storytelling is motivating because "it gives the learners a voice as well as freedom and creativity to express themselves" (2013:56), and allows learners to use English in a meaningful way since projects are published and shared online. Saumell has used digital storytelling in a number of ways from individual narrations to collaborative and creative "art stories", where students choose a number of famous paintings and write a narrative that linked them together.

"Historia do Dia" is another example of Digital Storytelling designated by Banaji, Perrotta and Cranmer (2010) as an example of creative and innovative good practices in compulsory education in Europe. Everyday a new story in English and Portuguese is prepared by a team of teachers, educators, graphic author and children, and published online. Then these stories are used in schools across Portugal "to aid in children's imaginative and creative development as well as their literacy skills and motivation in relation to reading and literature" (2010: 25-26). The researchers praise the highly imaginative outlook on the project, the diverse work team, and the great potential to become a starting gate to other activities combining imagination, ICT and literature.

Comic Books

According to Jiménez Raya, student-generated webcomics in language education, within a TBL or PBL methodology, are proposed as "a pedagogical tool to encourage effective curricular innovation in language teaching in order to develop autonomy, enhance student

motivation, foster creativity, and improve media literacy skills” (Jiménez, 2012: 91). In the ESL classroom, webcomics are used to help raise motivation while bolstering both receptive and productive skills (Jiménez Raya, 2012).

Chiera-Macchia and Rossetto (2011) investigated the use of comics through guided writing in a secondary school Italian language class. Their focus of interest lied on the exploration of visual sequencing and interaction using image and text to create a comic strip narrative in group interaction. Their study finds that, due to the increasing visual nature of communication, visual codes can be an important part of the production of meaning in second language learning, an argument that is reminiscent of Clark’s and Paivio’s (1991) dual coding theory, which recognizes the importance of imagery and narration in cognition.

Morrison, Bryan and Chilcoat (2002) concluded that having students create and share their own comics engages them in literacy exploration and helps them develop their writing, comprehension, and research skills. Furthermore, student-generated comic books encourage creativity and expand the learner’s visual-spatial intelligence.

The European Union, under the lifelong learning program and the Comenius action line, funded *Educomics* (www.educomics.org) in 2009 (European Year of Creativity and Innovation) in order to explore the added value of the use of web comics in education, mainly in language teaching and science education. Thanks to this project-based learning initiative, learners can read, write, listen to and speak about their personal interests and experiences in creative and imaginative ways, and use technology in a manner that is practical, original and effective (Jiménez Raya and López Sako, 2011).

Google Maps

K. Ragupathi (2013), reporting on lectures by Dr. McMorran at the Department of Japanese studies at the *National University of Singapore*, shows that google docs and maps are outstanding tools for collaboration as they allow simultaneous and asynchronous work, live chat, control editing settings, save changes and retrieve past versions of work, and offer clear online tutorials. R. K. Elliot (2009), an ESL Instructor at the *University of Oregon*, considers that Google Map projects “encourage students to practice reading, writing and speaking skills as well as develop visual literacy, cartographic and technical skills”.

5.2.4. Pedagogical implications for classroom practice

The pedagogical implications the previous literature review are twofold: implications for classroom practice and implications for curriculum development and future research. In this section, we focus on the actual pedagogical implications for classroom practice as a means of introducing the latter part of the present study, Instructional Ideas:

- Embedding creativity in the language classroom is paramount if we are to prepare students to be life-long learners and face present and future challenges. (Jackson, Oliver, Shaw and Wisdom, 2006)
- A creative act is by definition novel (original) and purposeful (meaningful, useful). By imbuing projects and tasks with “authentic” purpose (to inform, to present, etc.), a sense of goal, and allowing collaborative work, where meaning and use is negotiated, the new and the original may arise. (Sternberg and Lubart, 1999)
- Adaptation to the learner’s interests guarantees the learner’s level of involvement and engagement in any particular task, but needs to be complemented with a relaxed environment allowing trial and error and divergent thinking (Forgays and Forgays, 1992)
- Evaluation becomes an integral part of the task or project in the form of formative evaluation, self-evaluation, and summative evaluation. The first provides ongoing feedback of process to be used by teachers to improve their teaching and by students to improve their learning. Summative evaluation assesses overall performance of project based upon the initial premises, broadly, the goal or standard. Evaluation is to be diverse and accommodating to contexts.
- By inserting a cross-curricular projects in the EFL classroom, spaces for creativity are fostered and naturally strengthened (Elliot, 2009). Unusual connections or similarities in unexpected elements are to be expected and reinforced (Howard-Jones, 2014)
- Employing digital technologies by the creative teacher constantly opens new tools, methods and content for language instruction. (Banaji, Perrotta and Cranmer, 2010).
- Digital tools or ICTs allow and encourage collaborative and creative work. (Dale, 2008; Kangas, 2010; Elliot, 2009; Loveless, 2002; Tacchi, 2004)
- Planning is a mandate although the learners’ participation in the decision-making process must be allowed. (Feldhusen and Treffinger, 1980)
- Allow time for students to think and develop ideas in the classroom (Feldhusen and Treffinger, 1980)

5.3. Instructional Ideas: Developing Creativity and Cooperation through ICTs in the English as a second language classroom.

5.3.1. Digital Storytelling, a short documentary

Digital storytelling is the practice of combining narrative with digital content, that is, with images, sound, and video, to create a short movie. It can be transferable, storable, and made accessible to create communities where people can share experiences and ideas. According to Barret (2005:1) “digital storytelling facilitates the convergence of four student-centered learning strategies: student engagement, reflection for deep learning, project-based learning, and the effective integration of technology into instruction”.

It is widely used in ESL classroom worldwide and many resources and projects are available online. The reason for its success lies in the fact that it is engaging and motivational; it caters for different levels of technical expertise, from very sophisticated digital stories with highly produced audio and visual effect to a relatively basic storyline with slides and narration or music; it offers a vast number of ways in which digital storytelling can be used in the ESL classroom (topic driven stories, biographical and autobiographical accounts, fictional stories, etc.); and, it provides virtually limitless opportunities for creativity and self-expression.

Project Overview: Students make a short film (max. 5 min.) which shall explore a well-known story by Oscar Wilde, “The Canterville Ghost”, in documentary form.

The project combines literature and culture intertwined with various semiotic codes (linguistic, visual, and auditory). By exploring Wilde’s story, students deepen their understanding of this literary figure, his text and his context; explore and negotiate the meaning of the text; and, provide their personal outlook on the story.

Objectives

- Plan, develop and make a short film cooperatively.
- Gather and produce digital assets to support project in the form of photos, video, audio, and scanned imagery.
- Develop organizational, communication, and presentation skills.
- Collaborate with peers and the teacher to document a specific subject and perspective on the information gathered for presentation.

- Learn the basics of digital storytelling – including storyboarding, file management, presentation, and narration– and the conventional structure of documentaries.
- Summarize, explore and interpret a literary work.
- Expand their technology skills by using multiple media and working with video applications such as iMovie, Moviemaker or Pinnacle.
- Reflect on product and process.

Competences:

- Communicative competence: linguistic, sociolinguistic and pragmatic component.
- Digital competence: To obtain, evaluate, and organize information in digital formats; to learn and generate knowledge, products or processes; to communicate, interact and collaborate in digital environments; to use and manage devices and digital work environments.

Learning and Innovative skills:

- Creativity and Innovation:
 - Use a wide range of idea creation techniques (such as brainstorming and storyboarding).
 - Develop, implement and communicate new ideas to others effectively.
 - Demonstrate originality and inventiveness in work and understand real world limits to adapting new ideas.
- Communication and Collaboration:
 - Articulate thoughts and ideas effectively using oral, written and nonverbal communication skills in a variety of forms and contexts for a range of purposes (e.g. to inform, instruct, etc.)
 - Utilize multiple media and technologies.
 - Assume shared responsibility for collaborative work, demonstrate the ability to work effectively and respectfully in diverse teams and value the individual contributions made by each team member.

A digital storytelling project follows a cooperative learning process with the following phases:

- Stage I: Preparation and planning: Brainstorm; collect, sort and decide which ideas to pursue; Select the project/ story and develop plan to execute it.
- Stage II: Resources gathering and storyboarding: Break work into feasible sections and distribute individual tasks; Research and work collaboratively online on completion of plan; Create storyboard. Develop script and narration.
- Stage III: Workshop: Build basic digital story; Proof video
- Stage IV: Presentation, sharing, reflection, and evaluation.

Assessment

The project will be evaluated considering the following criteria:

- Planning and implementation: Storyboard and implementation plan.
- Content and narrative structure: Relevant, clear, concise, coherent
- Technical skills: Camera angles, framing, image and sound quality, video editing (transitions, flow, titles, etc.)
- Language Use: Grammar and vocabulary, appropriacy, intonation, etc.
- Group Dynamic: collaboration, task distribution, respect.
- Creativity and originality: wide range of sources and creation techniques; original combination of ideas, ideas-images; communicating something new.
- Self-evaluation.

5.3.2. A Comic Book using mobile devices

A comic book, or simply *comic*, is a publication consisting of comics in a sequence of juxtaposed panels that represent individual scenes. Panels are usually accompanied by brief descriptive prose, written narrative, and dialogues contained in word balloons, so characteristic of this medium.

Project overview: Students will make an original comic story in small groups.

This group project, also incorporating various semiotic codes (linguistic and visual), aims at developing the learners' narrative and visual creativity, and language proficiency through

cooperation. Hereby, they will use narration, descriptive prose and dialogue in word balloons, all of it set in a visual media where scenes are broken into individually sequenced panels.

Objectives

- To identify basic literary elements.
- To enhance narration, description and dialogue.
- To develop the skills involved in the production of a narrative of various semiotic codes, visual and linguistic.
- To develop ICT skills, using technology.
- To create a digital comic book in English.

Competences:

- Communicative competence: linguistic, sociolinguistic and pragmatic component.
- Digital competence: To obtain, evaluate, and organize information in digital formats; to learn and generate knowledge, products or processes; to communicate, interact and collaborate in digital environments; to use and manage devices and digital work environments.

Learning and Innovative skills:

- Creativity and Innovation:
 - Use a wide range of idea creation techniques (such as brainstorming)
 - Develop, implement and communicate new ideas to others effectively.
 - Demonstrate originality and inventiveness in work and understand real world limits to adapting new ideas.
- Communication and Collaboration:
 - Articulate thoughts and ideas effectively using oral, written and nonverbal communication skills in a variety of forms and contexts.
 - Use communication for a range of purposes (e.g. to inform, instruct, etc.).
 - Utilize multiple media and technologies.

- Demonstrate the ability to work effectively and respectfully in diverse teams.
- Exercising flexibility and willingness to be helpful in making compromises to accomplish a common goal.
- Assume shared responsibility for collaborative work, and value the individual contributions made by each team member.

Methodology

- Stage I, Preparation and Planning Stage: Students are given the “Comic Project Planning Sheet”. In groups, students brainstorm, sort and decide idea to pursue.
- Stage II, Plot development and storyboarding: Develop narrative elements and consider feasibility; break story into scenes; distribute tasks; create storyboard and decide on camera angles. Develop script, narration and descriptions.
- Stage III, The shooting: Bring costumes or props necessary; Shoot photos with mobile phones according to plan.
- Stage IV: Workshop: Edit photos in comic style, add word balloons, place images in sequenced juxtaposed panels. Finally, document is transformed into a pdf file.
- Stage V: Presentation, sharing and self-evaluation.

Resources

Option 1: Computer and digital photo camera, no internet connection needed. Word processor and photo editor.

Option 2: Smartphone or tablet. Photo applications required, for instance: “Cartoon Camera”, available with IOS and Android, to “cartoonize” photos; “ComicBook” to add word balloons and create sequenced panels. All applications are readily available for IOS and Android devices.

Assessment

Students are evaluated for both the “planning sheet” and the final product. The planning sheet takes into account:

- Content development (2 points);
- Language use (4 points);

- Diverse camera angles (2 points);
- Presentation (neatness, etc.) (2 points).

The final product, the Digital Comic, is evaluated following detailed rubrics (appendix 4) which is handed out to the students first to self-evaluate:

- Planning and implementation: Storyboard and implementation plan.
- Content and narrative structure: Relevant, clear, concise, coherent
- Layout, presentation and Visual key: Easy to read and follow, neat and well-structured; Camera angles, framing, image quality, etc.
- Language Use: Grammar and vocabulary, appropriacy, intonation, etc.
- Group Dynamic: collaboration, task distribution, respect.
- Creativity and originality: wide range of creative techniques; original combination of ideas, ideas-images; original storyline.
- Self-evaluation.

Then, teacher returns evaluation sheet. An extra point is granted to the groups who improve their comic book.

5.3.3. A Google Map Virtual Tour around Los Angeles

With Google Maps students create online collaborative maps to share with their classmates and the world. They can describe and comment on landmarks or places of their interest, plan routes, draw features directly on a map, add specific information about buildings, parks, etc., include videos, provide a satellite, map or street view of desired areas, etc. It is a great tool for language learners as they can arrange virtual tours of countries where a language they are studying is spoken. They can include planning for local transportation, sightseeing, dining and hotel reservations). It can also help learners understand some geography concepts, such as map reading location, or distance measuring.

Project Overview: Students place interactive marks on a Google Map of Los Angeles and provide an itinerary throughout the city for a five-day tour. Then, students present their virtual tour to their peers. The objectives of the lesson are:

Objectives

- To identify and select the most interesting visitor attractions in Los Angeles according to their likings.
- To create tourist itineraries.
- To deepen the cultural knowledge of the city of Los Angeles.
- Create collaborative maps: read location, measure distance.
- To present information to their peers.

Competences:

- Communicative competence: linguistic, sociolinguistic and pragmatic component.
- Digital competence: To obtain, evaluate, and organize information in digital formats; to learn and generate knowledge, products or processes; to communicate, interact and collaborate in digital environments; to use and manage devices and digital work environments.

Learning and Innovation Skills:

- Creativity and Innovation:
 - Use a wide range of idea creation techniques (such as brainstorming)
 - Develop, implement and communicate new ideas to others effectively.
 - Demonstrate originality and inventiveness in work and understand real world limits to adapting new ideas.
- Communication and Collaboration:
 - Articulate thoughts and ideas effectively using oral, written and nonverbal communication skills in a variety of forms and contexts
 - Use communication for a range of purposes (e.g. to inform, instruct, etc.)
 - Utilize multiple media and technologies
 - Demonstrate the ability to work effectively and respectfully in diverse teams
 - Assume shared responsibility for collaborative work, and value the individual contributions made by each team member.

- Stage I, Warm-up and introduction: Watching “Creating Maps using custom maps for Google maps”; Stage II,
- Stage II, Planning: Plan out locations and general framework for the virtual visit. Distribute tasks.
- Stage III, Asset gathering and workshop: Gather resources and develop virtual tour: add content to landmarks (text, video, images), create routes and prepare final presentation to class.
- Stage IV, Presentation, online sharing and evaluation.

Assessment

Students are evaluated for the creation of an online Google Map Tour of Los Angeles and for their oral presentation to their peers in class. The first is assessed having the following criteria in mind: content; language use; Technical skills; Use of computer lab time. The second, the oral presentation, is evaluated in this fashion: Requirements; delivery; Content and Organization; Language skills; technical skills. Students are given a reduced copy of rubrics and evaluate their classmates’ performance. Then, a full copy of rubrics is handed out to individual groups for self-evaluation.

6. CONCLUSIONS AND FINAL REMARKS

6.1. A teacher's personal experience

Two of the instructional ideas proposed in the previous section (the comic book and the google maps virtual tour) correspond to two didactic units that were carried out during the second and third semesters of 2013 in two classes of Practical English, a compulsory subject for students of 4th of ESO (Compulsory Secondary Education) but an elective course for students of 1st of Bachillerato (Year 12, sixth form) in Spain. The third, the literary digital storytelling, is programmed for the 2nd semester of the 2nd of Bachillerato English class (Year 13, sixth form), which corresponds to the last year of non-compulsory secondary education in Spain, in 2015.

Groups in Practical English ranged from 10-15 students, they were gender-mixed and had similar socio-economic backgrounds. 4th of ESO students met weekly for 55 minutes and participated in a project-based language learning classroom and carried out three different tasks, one per semester; whereas 1st of Bachillerato students of Practical English met four times a week for a whole academic year in a communicative language classroom following a textbook aimed at improving listening and speaking skills through a number of video-based activities and a group project per semester. Finally, students of 2nd of Bachillerato are set in larger groups, 25-30 students, gender-mixed, and sharing similar backgrounds. Their course is designed to develop their communicative skills in English, especially reading and writing, and are familiar with task-based and project-based instruction.

The **digital comic book** started in 2008 as a classroom activity using the web application called *comicstrips.com* but was limited to a three panel comedy sketch as part of the classroom unit content. The activity became an instant success and year after year it grew bigger in scope, intent and complexity, until it turned into a full-blown project. It was first used as a pilot unit in 2012 and since then it has been implemented year after year and the whole class comic book is uploaded in pdf format to a digital publishing platform such as *www.issuu.com*.

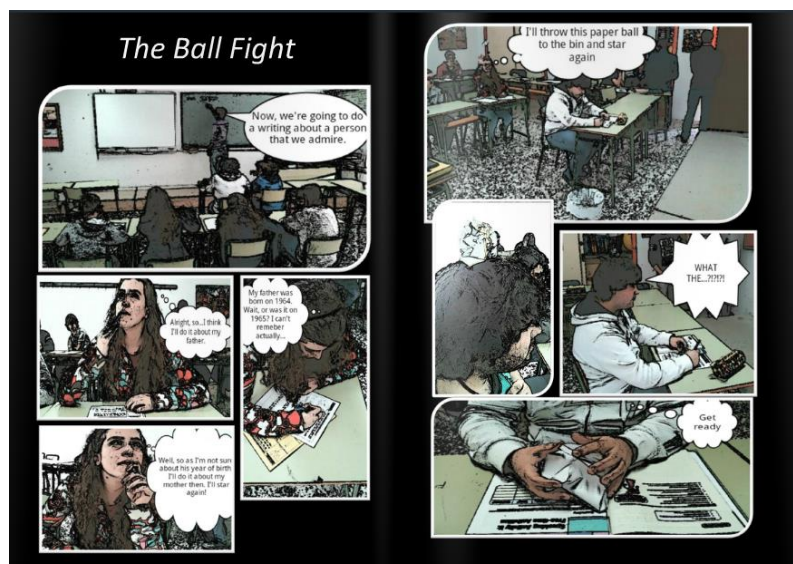


Image 1. Screenshot of comic book created by students of 1st Bachillerato, available at www.issuu.com

If the task is to be successful, planning stages are to be upheld and certain extra time at the developing stage are essential; otherwise, poor results in the quality of comics are to be expected. A brief introduction to camera shots and angles helps deliver a rich comic book. Focusing on storyboarding and narrative concision saves trouble in later stages of task.

Based on the results of this experience, I strongly believe that comic books are a fantastic tool to promote creativity and collaboration through the use of digital technologies as it:

- Supports and reinforces unusual ideas of students;
- Adapts to student interests and reflects their sense of humor, and broadly speaking their perspective on life;
- Allows time for students to think and develop ideas in the classroom.
- Creates a warm and supportive environment, of mutual respect and acceptance;
- Allows students to take part in the decision-making process and gets everyone involved;
- Demands a creative interplay of different codes (visual and linguistic) and calls for concision;
- Keeps motivation high. Students are the creators of narrative, dialogues, and take photos. In contrast to other forms of web comics, using smartphone applications that cartoonize camera photos allows students to see themselves as part of the story but

in a concealed and cartoonized way, something they enjoy. They are the directors and actors of the story.

I have come across, however, certain constraints that I have been minimizing with practice but are more or less evident depending on the group:

- Group work lies in the hands of the group; nevertheless, individual work is needed and when a student is not able to comply with his/her shared part of the task, the group task is affected. Understanding the learner's difficulties and negotiating with him/her and the group have proven to be the most effective way. Allowing the necessary time and encouragement often leads to a successful task.
- Digital technologies are readily available to most students but at times some do not have access to broadband internet, smartphones or computers. Providing resources and extra time in deadline usually balances this problem.
- Some learners find technology challenging as the project requires some technical skills. When I come across this problem, students who find it harder to deal with technical issues take charge of other responsibilities. Their level of engagement in technology grows progressively in later tasks.
- English language use. Only groups with higher command of the language venture to work on the task in English; however, even though this particular task does not include the assessment of speaking skills as such, groups who chose to speak in their native language are to present to the class certain aspects of their project.
- Time constraints is definitely an issue. Planning the task is essential and deadlines, necessary; nevertheless, group dynamic and work flow are to be considered at all times. Otherwise, it places too much pressure on production.

The **Google Map Virtual Tour** was introduced in the academic year 2013-2014 for 4th of ESO students. It brought to life traditional poster presentation with an incredibly rich hypertext and multiple media support (audio, video and photos). Students created a virtual visit to Los Angeles and stopped and dwelled at their favorite sites.

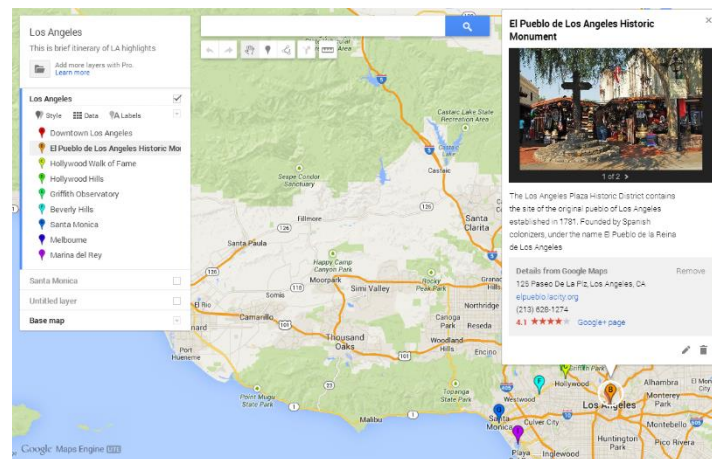


Image 2. Screenshot of a customized Google Map displaying a virtual tour around Los Angeles, California, created by students of 4th of ESO.

The results of the experience are extremely positive and were beyond expectations as it was a tool that had never been used by any student before. It proved to be a very creative and absolutely collaborative task since:

- Google maps is customizable according the students' interests. The tour may include walking tours, different transportation.
- It is created collaboratively synchronously and asynchronously with a google account.
- It includes multiple media; thus enriching the presentation experience.
- It provides access to Google Views, 360° panoramas of the most famous landmarks around the world.

Due to the fact that this particular web application had never been used by the students, additional time had to be allotted to provide adequate instruction and technical difficulties were encountered beyond their knowledge. At the same time, the school's internet restrictions hindered the access to plenty of the students' multimedia; thus, presentations were heavily affected by it. All in all, some other groups went beyond the expectations of the task by including costs of transportation, price of entrance tickets, etc., something which proved appealing to the audience. Without the Internet, having access to this "authentic" information would be impossible.

Finally, the **digital storytelling** (short documentary) task is currently planned for instruction for the second semester of the current academic year. This innovative video production is aimed at exploring and interpreting a cultural artifact, a short story by Oscar Wilde. Rather

than using a conventional content-based exam to assess a reading activity, this digital storytelling task involves critical thinking skills and calls for a creative and personal product.

The challenges to be expected in my context are mainly two. First, digital storytelling requires learning multiple software applications and demands a very proficient computer user to exploit the possibilities of the medium. Second, a significant amount of time commitment is needed, not only for mastering new technologies, but also for content planning, gathering material (audio voiceover, music, video, photos, etc.) design and production. Perhaps this task may take the form of a full project (PBL) in the year 2015-2016 and be developed over an extended period of time, probably a whole academic year, if it is to give an adequate response to the task.

In need of further classroom research, I am confident to claim in my experience these projects help language learning. By providing creative and motivating tasks, most students are willing to engage in language production. They are more eager to play with the language and are not afraid of “making mistakes” or “sounding silly” since the goal is to make their point or story across. Their writing skills also are put to work and, thus, their discourse competence. At the same time, receptive skills are nurtured. Students are exposed to a great amount of input language when researching and producing their work. Much of this language is beyond their level of competence; yet, the very nature of internet browsing, makes the experience of moving around unknown language easier. New and meaningful vocabulary and structures for project make their way through as well as the technical vocabulary of computers.

In broad term, and acknowledging the limitations of the present personal narration as teacher, I strongly believe that projects can be an effective tool for the integration of language, content, and skills. With the Google Map Tour, my students, after presenting orally their work to the class, reported that they learned research and presentation skills, acquired new vocabulary about visiting places, and used English to gather information, organize and present their virtual tour. They valued their peers’ presentations and acknowledged the originality and uniqueness in each one of them. As regards the comic book project, students noted how they were introduced to and actually used non-standard words and phrases which were not typically found in textbooks or within a classroom environment. Students valued the “narrative freedom” they were given to create and treasured cooperation within the group.

6.2. Conclusions and final remarks

“...everything is a tool if you hold it right”, Annie DiFranco

As seen throughout this dissertation, even though the benefits of digital technologies for learning, learning conditions, language learning and creativity have been supported by research, “computers, in and of themselves, do little to enact learning” (Meskill, 1999). As pointed out by Warschauer (1996), who echoes Garret, “the use of the computer does not constitute a method”, it is rather a “medium in which a variety of methods, approaches, and pedagogical philosophies may be implemented”. Even though, a just dose of skepticism is needed, there is no doubt about the fact that digital technologies are incredible tools whose power lies on the hands of committed and informed instructors, on how they are put to use. Everything is a tool if you hold it right.

A number of conclusions and final remarks are called upon in order to inform instructors, curriculum developers, future researchers, and designers in educational technologies:

- Creativity is a necessary skill that needs to be properly embedded in any education curriculum, stimulated by motivating tasks and projects, and nurtured by teachers. Hence, “creating the conditions that support creativity should be an explicit part of teaching a foreign language” (Jiménez Raya, 2012: 94).
- Developing creativity demands a general framework of reference, a set of standards, in order to guide classroom planning and assessment (Loveless, 2002).
- Fostering creativity in actual classroom practice requires a careful rethinking of traditional time management and schedules allowing space for play, experimentation and flow (Feldhusen and Treffinger, 1980).
- Guidelines for the evaluation of “creative tasks” are to be developed and implemented through constant classroom practice.
- Thoughtful planning in integrating digital technologies into language learning can serve the purposes of acquisition-oriented language activity but it is heavily contingent on understanding the power and potential of digital technologies by instructors. Structuring, planning and supporting learner engagement depends on “careful design of task and ongoing teacher scaffolding and support of active collaboration” (Meskill, 1999: 151).
- Teacher-training and colleague support become an absolute necessity. This means developing partnerships and allotting time and resources (NACCCE, 1999)

- A closer relationship, if not symbiosis among teachers, technology developers and curriculum developers is expected if we are really seeking to foster creative minds in a technologically-driven present and future (NACCCE, 1999).
- Projects are to be valued as much as life-long learning tools than end products in themselves, where trial and error, negotiation, collaboration and initiative are to be valued and assessed.
- Motivation is “the absolute key to success” (Banaji, Perrotta and Cranmer, 2010). The very fragile nature of creativity calls for a teacher-negotiator willing and prepared to take risks, appreciating shifts and unexpected turns, but understanding long term processes that elude mere term formative evaluation.
- English language learners can benefit from a communicative approach to language teaching imbued with a constructivist and project-based outlook as they provide opportunities for collaborative learning that are authentic, focused on meaning and use, and provide a ground for creative work.

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