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How to effectively integrate technology in the foreign language classroom for learning and collaboration

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Abstract

This project aims to investigate the potential of Web 2.0 tools in the development of communicative competence in English language amongst undergraduate students. The theoretical framework that underpins this study is rooted in national and European policies emerging from the Bologna Process. It focuses first of all on the role of the English language in the fulfillment of Bologna stated goals and, secondly, it analyses the methodological and pedagogical challenges derived from the objectives and guidelines established. Besides this, the Bologna Process is also understood within a changing economic and social landscape, where ongoing innovation in Information and Communication Technologies have generated a rapid production and dissemination of information on a global scale. This new framework has originated new challenges as far as English language teaching and learning in higher education is concerned. These include the creation of a dynamic environment leading to both dialogical and dialectical learning, thus enhancing opportunities to communicate and act through and in English. The methodological approach adopted in this study consisted of an action research project over two semesters in the course units: English II and English III, from the degree course in Tourism at the School of Technology and Management, of the Polytechnic Institute of Viseu. Stemming from the core theme of each course unit and intended learning outcomes, interactional tasks using Web 2.0 tools and involving the construction of collaborative outputs were designed and implemented. The analysis of the information retrieved points to a markedly positive impact of Web 2.0 tools on the implementation of interactional tasks in English language learning in higher education. The students' active involvement in solving authentic tasks, the encouragement of cultural awareness, and the development of individual and collaborative (meta) competences all attest to the importance of social networks, wikis and podcasts in English language learning. This study represents an innovative and very positive contribution for applied linguistics studies, legitimizing Web 2.0 applications as an exceptional strategy in meeting the goals raised by Bologna.

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1. Computer Assisted Language Learning: an overview

Continuous developments in ICT over the last 60 years have had strong implications in foreign language teaching and learning. The emergence and dissemination of the concept of CALL (Computer Assisted Language Learning) is an example of the growing interest of teachers and researchers for this area of knowledge. The evolution of the concept is closely related to the findings in the area of ICT. The work of Warschauer (2000) should also be highlighted, since the author has developed an ongoing research work related to this theme, namely trying to systematise different stages of CALL (see Table 1)

Table 1. Different stages of CALL.

Stage	Technology	Pedagogical approach	Computer use	Teacher role
Behaviourist Structural	Mainframe	Grammar-translationand audiovisual	Translation exercises Drill-and-practice	Only source of information Instructor
Communicative	Personal computer	Communicative approach	Role-plays Textual reconstruction Simulations Ensino implícito da gramática	Activator Facilitator
Integrative	Multimedia and Web-based apps.	Content-based learning	Authentic social contexts Exercises combining Reading, Reading, listening and writing	Supervisor Mentor

The first phase, associated with behaviorist learning theories is characterized by activities of stimulus-response and repetitive exercises. Next we have the communicative phase, which is based on a communicative approach to teaching and learning and the focus lies now on the effective use of language. Originality is encouraged and textual reconstruction activities and role-play are promoted. The integrative phase coincides with the development of multimedia technology and the emergence of new theories which argue that language learning is a social construction. According to this perspective, students should be confronted with rich and authentic learning environments.

Although Warschauer had not developed a fourth phase, he already pointed out some directions for the evolution of computer-mediated language learning and he named this new stage as intelligent. The main goal of intelligent CALL is to prepare students for active citizenship in a global and networked society. The author highlights the fact that it is essential to be able to find, evaluate and critically interpret information available on the Web, stating that "students themselves create their 'texts' from their own selection of materials from a variety of sources. In teaching, reading, we will have to go behind how to decode texts, or understand them and pay increasing attention to how to explore and interpret the vast range of online texts" (Warschauer&Healey, 1998).

The second aspect to be considered relates to an effective online writing, since that is ubiquitous in the knowledge society and was reinforced by the advent of Web 2.0. The authors stress that the development of a digital literacy is also one of the goals of teaching and learning foreign languages, and the ultimate purpose is that the learner becomes active, autonomous, independent and able to plan her/his "active, conscious , and purposeful self-regulation of learning" (Oxford, 2003). This intelligent phase, features the concept of multimodality, which refers not only to the variety of media available today and the different ways of constructing meaning, but also the possibility of combining these modes more easily in an orchestration of meanings (Kress, Jewitt, Ogborne, &Tsatsarelis, 2001).

1.1. Web 2.0 and dialogical and dialectical English language learning

Web 2.0 open, participatory and social nature has given dialogue a prominent place in the knowledge building process. The construction of meaningful learning will greatly depend on learners' capacity to engage in the creation and maintenance of dialogical processes. However, the primacy of dialogue in learning does not directly emerge from the spread of Web 2.0. Dialogue, according to Ravenscroft (2011), "is coevolving with these technologies, which arguably provide social opportunities that are more open, and are used more often than was previously possible with the traditional methods of communication, dialogue and discourse" (Ravenscroft, 2011),. Associated with dialogue, we have the concepts of dialectics and dialogic, which have been suggested as a structural pedagogy for the twenty-first century (Dalsgaard, 2008); (Ravenscroft, Wegerif& Hartley, 2007). Hence, we consider dialectics and dialogic as two relevant dimensions that focus on complementary aspects of the role of dialogue in the learning process. While dialectics emphasizes cognitive and epistemic dimensions, dialogic gives primacy to emotional and interpersonal dimensions. The interrelation of the two dimensions in the learning process is emphasised by Ravenscroft, Wegerif& Hartley (2007). "the desire to reason to progress towards a rational synthesis does not have to override the need to understand others, and likewise, the desire to understand others does not have to override the often pragmatic need to reach a rational consensus that links to purposeful action in a context" (Ravenscroft, Wegerif& Hartley, 2007).

The integration of these principles in the structuring, planning and execution of communicative tasks is both complex and challenging. First of all, the process begins with a multiplicity of definitions and views of 'task'. Regarding this, Ollivier&Puren (2011) as a result of a critical analysis of different perspectives listed and summarised the most relevant characteristics of a task:

• Focus should be on meaning and the mobilisation of language skills should come naturally when attempting to solve the task;
• The completion of a task leads to an accurate outcome;
• A task is not, generally, exclusively linguistic;
• Resolution of a task involves social interaction;
• Task execution is affected by certain constraints and limitations;
• Solving tasks involve the deployment of cognitive processes and different skills;
• Tasks involve different steps or sub-tasks;
• Tasks should privilege authenticity.

Authenticity is also emphasised by Nunan (2004), who distinguishes between real world or target tasks and pedagogical tasks. The Common European Framework of Reference for Languages (CEFRL) also alludes to real-life, target or rehearsal tasks, conceived as "tasks are chosen on the basis of learners' needs outside the classroom, whether in the personal and public domains, or related to more specific occupational or educational needs" Council of Europe (2001). Ellis (2003) goes deeper on this matter and refers to two types of authenticity: situational and interactional. Situational authenticity is related to real world activities, while interactional authenticity demands that learners' communicative reaction or response is genuine, similar to the real world. In our view, Web 2.0 has promoted new opportunities for foreign language classes, allowing the implementation of tasks that involve both types of authenticity. In addition, Ollivier&Puren (2011) present a diagram that emphasizes the role of interaction and co-action in performing a task, stressing the role of Web 2.0 as a privileged space for the assessment of co-action.

2. Methodology

The main question underlying this study is the following: How to Effectively Integrate Technology in the Foreign Language Classroom for Learning and Collaboration?

In order the previous question, two main objectives were formulated:

•   Harness the potential of Web 2.0 tools in the teaching and learning of English in higher education.

•   Identify the strengths and weaknesses of using Web 2.0 tools in English language learning for the collaborative construction of knowledge in higher education.

The methodological approach adopted for this study consisted of an action research project (see Figure 1) over two semesters, according to Stringer (2007), in the English II and English III course units from the degree course in Tourism at the School of Technology and Management, Polytechnic Institute of Viseu. The researcher felt the need to revise her teaching practices, given that students, who lacked motivation and prior learning, were used to teacher-centered approaches, and were not autonomous in English language learning. Stemming from the core theme of each course unit and intended learning outcomes, interactional tasks using Web 2.0 tools and involving the construction of collaborative outputs were designed and implemented.

This research focused on a mixed, combing the potential of the quantitative and qualitative methods for a deeper understanding of the phenomenon under study. Thus, with regard to the quantitative analysis, we used descriptive statistics to present the descriptions of the observed data. After the process of collecting, classifying and organizing data, we sought to synthesize and represent in an intelligible form the information obtained. Regarding qualitative data analysis, it was carried out through content analysis

In order to aid the process of data analysis, we used the software WebQDA, a computer program for the qualitative research developed at the University of Aveiro, The program aims to help researchers to deal with non-numeric and unstructured data, allowing you to edit, view and link documents. At the same time, it allows to create categories, encode, manage, filter, research and question data in order to answer research questions.
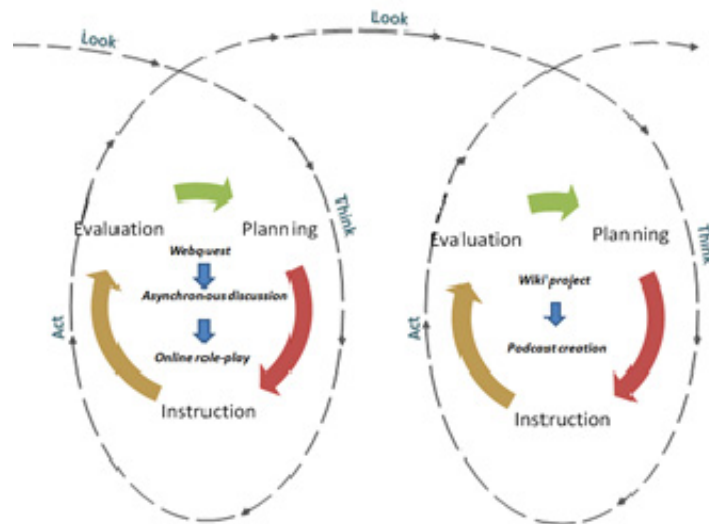

Fig. 1. Action research plan, adapted from Stringer (2007)

The planning of tasks took into account data analysis from a preliminary demographics questionnaire, more precisely students' low familiarity with Web 2.0 tools, as well as the fact that most of them never had the opportunity to use them in educational settings. The learning outcomes set for the different activities were defined according to the Common European Framework of Reference for Languages, level B2 (comprehension and production)and level B1 (interaction).

Activities from the first research cycle stem from the theme "Organising and planning a trip to London", and include the following tasks:

•   The completion of a Webquest entitled "Discover London" whose aim was to motivate students for involvement and participation in the project, also familiarising them with some aspects that they would need to explore in some depth in the following stages of the project. At the end of the activity data was collected by means of a questionnaire in order to ascertain the impact of the activity on students' motivation and willingness to work collaboratively online.

• Asynchronous discussions, in which the main objective was to build a virtual learning community in English, using for this purpose Grouply social network where students would, at this stage, interact online, discussing and negotiating a collaborative solution for the challenges presented. At the end of the activity focus groups were held with the students involved in order to find out their opinions on possible strengths and weaknesses of the activity regarding course unit's contents learning also concerning English language learning process.

• Online role-play, where students organized into groups and assuming specific roles would have to organise a visit to London for a group of 25 students. Social network Grouply was again used, and communication between the different roles performed by exchanging emails. The completion of the activity followed a specific weekly timeline and involved, in most cases, a thorough research on the part of students. It was an authentic activity, since in addition to situational authenticity, interactional authenticity was also encouraged. In order to monitor the development of the activity, students were asked to write a reflection each week, mentioning what they had learned, the main difficulties encountered, and also assessing group dynamics. At the end of the activity focus groups were held in order to reflect both on the collaboratively constructed output, and the communication processes underlying it.

The second research cycle unifying theme was "On Tour" and two moments can be identified:

• The construction of a wiki, where students would, collaboratively create a 2-day themed itinerary in the city of Viseu, also providing a detailed written description of the main tourist attractions included in the itinerary. Data collection process was aided by an observation grid filled by the investigator during the course of the activity, considering criteria as students' openness to the activity and also in relation to collaborative work; pre-writing activities developed by participants; integrity and fairness of contributions; textual organization, coherence and cohesion and constructive editing. Taking into account the criteria listed, a questionnaire was also created, in order to find out students' opinions.

• The creation of a podcast, aimed at students, in pairs, to present an oral description of the tourist attractions included on the wiki, thus complementing the work done in the previous activity. Data collection process was similar to the previous activity. A checklist for the assessment of podcasts developed by the students was used including criteria such as the podcast structure, presentation, technical aspects and collaboration. Students were also asked to complete a questionnaire, for later data triangulation.

3. Findings

Data analysis points to a markedly positive impact of Web 2.0 tools on the implementation of interactional tasks in English language learning in higher education. The use of authentic materials related to professional domain of the study cycle was extremely positive, because in addition to leveraging students' motivation, it also allowed them to contact with a rich and varied input in English, stimulating reading and an autonomous exploration of these resources, namely finding out unfamiliar vocabulary. Actually, leaning new vocabulary was very much emphasized at different stages of the research cycle. Students also felt the need to engage themselves in conducting new research in English language in order to be able to respond to the challenges given, thus developing research, critical analysis and selection of information skills, what we consider extremely important in the current educational context, as pointed out in the theoretical framework of this project, particularly through the lens of the Bologna Process, which defends the role of higher education in the formation of autonomous, reflective and critical citizens, able to contribute positively to building a knowledge society and able to continue the journey of lifelong learning. Contact with authentic materials and, as such, culturally contextualized, also contributed to the development of a critical cultural awareness, namely familiarization with patterns, routines, behaviours and customs of a given community, key aspect in building a democratic society.Table 2 summarises the most relevant findings of each task implemented.

Table 2. Summary of findings.

Task	Main strengths	Main difficulties
Webquest "Discover London"	Increased motivation; Vocabulary acquisition; Opportunities for the development of communicative competence in English; Contact with meaningful tourism-related information.	Understanding the information displayed on some websites.
Asynchronous Discussions	Vocabulary learning; Writing skills; Information sharing; Metacognition skills.	Collaborative work; Written comprehension; Fear of exposure.
Online role-play: planning a school trip to London	Writing skills; Vocabulary learning; Increased opportunities to use English; Cultural awareness.	Collaborative work; Selection of accurate information.
Wiki project: Visit Viseu	A positive attitude toward online group collaboration; Integrity of contributions; Fulfilment of agreed-upon roles; Constructive additions and revisions to improve the project outcomes.	Most information sources were only available in Portuguese; Portuguese – English translation using Google Translate Linguistic performance correlated with a lack of strategic competence in using available tools.
Podcast creation: Viseu attractions you mustn't miss!	Accurate information and succinct concepts are presented; Students' assessment of the final output is positive; Students' perceptions are influenced by their metalinguistic awareness.	Delivery is hesitant, and choppy, giving the impression of reading; Enunciation, expression, rhythm are sometimes distracting.

As far as the impact of the use of authentic materials and situations is concerned, it should be noted that results obtained in the second research cycle are somewhat different from the previous cycle, which results from the nature of the tasks implemented. In common we have the importance of implementing authentic tasks in promoting motivation and autonomy in research and exploitation of resources. However, the fact that students had to build a wiki on the main tourist attractions of the city of Viseu led students to privilege materials in Portuguese, despite being aware of the existence of materials in English. It is true that there was a concern with selecting the most relevant information and to adapt it to the desired text typology, which proves positive. The main problem lays in the fact that students prefer to write their descriptions in Portuguese first, opting subsequently by translating the whole text into English, in some cases relying solely on online translation tools, not being able to critically evaluate the outputs and correct them.

4. Discussion

The use of authentic materials proved to be very positive, since students were confronted with authentic language, which, most of the times, is different from the one that commonly appears in textbooks, where the practice is confined by the language structures and vocabulary defined for a given level of proficiency and, therefore, decontextualized from their speakers, values and cultural norms. It also allowed respecting students' idiosyncrasies

and learning styles, given that activities combined face-to-face with e-learning. Another aspect that should be highlighted is the promotion of autonomy in conducting research in English language and the promotion of strategic competence, since students frequently used online translation tools and online dictionaries. The creation of the learning community "English for Tourism" in Grouply social network was the driving force of the collaborative work developed over the two semesters. In order to play an active role in the asynchronous discussions students needed to understand and select relevant information to later write a comment sustained at specific facts. This way, it was possible to promote eclectic learning, combining reception and interaction activities.

Students recognised Web 2.0 potential in learning English, emphasizing the acquisition of vocabulary and the development of writing skills. This was mainly due to increased opportunities to communicate in English outside the physical walls of the classroom. Also, the sharing of ideas among participants contributed to the production of more complete outcomes and it also promoted an increased metalinguistic awareness.

Regarding interactional authenticity, there was a concern with the sociolinguistic appropriateness of their written productions. Collaborative work was transverse to the different activities and constituted both a strength and an obstacle to the proposed activities. This difficulty in working collaboratively as a class can be explained by the innovative character of the tasks implemented. It is common practice for students to complete work in pairs or small groups, but not so when the group is constituted by all the students in the class.

5. Concluding remarks

This study represents an innovative and very positive contribution for applied linguistics studies, legitimizing Web 2.0 applications as an exceptional strategy in meeting the goals raised by Bologna, allowing us to highlight the following aspects:

• Web 2.0 enhanced English language learners among undergraduates has allowed an active involvement of students in solving authentic tasks, combining both situational and interactional authenticity, and articulating different linguistic activities defined by the CEFRL, thus contributing to the development of a plurilingual and pluricultural competence.

• Students who participated in both action research cycles developed capabilities to manage their own learning process, making decisions about contents and materials (what), strategies (how), time / pace (when) and space (where).

• The dialectical, dialogical and actional approach used promoted a deeper student involvement in interactive processes, through the use of diverse strategies, hence promoting the development of skills leading to improvements in English language teaching and learning in higher education.

• There was a correlation between linguistic performance and the strategic use of available tools, namely the use of cognitive and metacognitive strategies by some learners, allowing them to plan and monitor their learning process, becoming aware of the strategies used to solve the proposed tasks and, ultimately, their language learning strategies.

As we have argued in the theoretical framework, the implementation of a EHEA is intrinsically related to the development of a multilingual and multicultural competence on the part of Europeans. We also emphasized the role of foreign languages in pursuing three of the ultimate goals of the Bologna process, namely mobility, employability and lifelong learning. The tasks implemented throughout the project, by favoring a dialogical, dialectical and actional language learning approach, contributed to the development of a reflective, active and critical attitude on the part of learners, enabling them to communicate and interact in an increasingly interconnected and markedly more multilingual and multicultural society.

This was a rather innovative research project that allowed a connection between communication and action, using for that purpose a wide array of meaningful and authentic materials and resources. Although in recent years there has been an increased interest in the use of Web 2.0 tools for language learning, such is sometimes conceived within a cognitivist or constructivist approach, not maximizing the potential of these tools at the level of interaction and co-action. The implementation of authentic tasks made it possible to implement more interesting and social and

cognitively stimulating activities, hence fostering effective collaboration among students. Students could anticipate communicative transactions from the professional area of their study cycle, with additional opportunities to communicate in English, which not only increased language use, but also allowed them to be innovative by conceiving a real product to the general public.

References

Council of Europe. (2001). *Common European Framework of Reference for Languages: Learning, Teaching and Assessment*. Cambridge: Cambridge University

Dalsgaard, C. (2008). From transmission to dialogue: Personalised and social knowledge media. *MedieKultur. Journal of media and communication research*, 46, 18-33.

Ellis, R.(2003). *Task-based language learning and teaching*. Oxford: Oxford University Press.

Kress, G., Jewitt, C., Ogborne, J. and Tsatsarelis, C. 2001. *Multimodal teaching and learning: The rhetorics of the science classroom*. London and New York: Continuum.

Nunan, D. (2004). *Task-Based Language Learning*. Cambridge: Cambridge University Press.

Ollivier, C. &Puren, L. (2011). *Le web 2.0 en la classe de langue*. Paris: Editions Maison des Langues.

Oxford, R. (2003). Language learning styles and strategies: Concepts and relationships. *International Review of Applied Linguistics in Language Teaching Journal*, 41(4), 271-278. http://web.ntpu.edu.tw/~language /workshop/read2.pdf

Ravenscroft, A. (2011). Dialogue and connectivism: A new approach to understanding and promoting dialogue-rich networked learning. *The International Review Of Research In Open And Distance Learning*, 12(3), 139-160. http://www.irrodl.org/index.php/irrodl/article/view/934

Ravenscroft, A, Wegerif, R, & Hartley, R. (2007). Reclaiming thinking: Dialectic, dialogic and learning in the digital age. In Jean Underwood & Julie Dockrell (Eds.), Learning through Digital Technologies (pp. 39–57). *British Journal of Educational Psychology Monograph Series*, 2(5).

Stringer, E. (2007). *Action Research*. London: Sage.

Warschauer, M. & Healey, D. (1998). Computers and language learning: An overview. *Language Teaching. Language Teaching*, 31, 57-71. http://www.gse.uci.edu/person/warschauer_m/overview.html

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