‘THINKING ABOUT LEARNING’: EXPLORING THE USE OF METACOGNITIVE STRATEGIES IN ONLINE COLLABORATIVE PROJECTS FOR DISTANCE PROFESSIONAL ENGLISH LEARNING

Elena Bárcena, Elena Martín-Monje & Noa Talaván
UNED

Abstract
This article explores the use of metacognitive strategies in the context of online collaborative language projects, on the basis of the authors’ claim that they can unveil spurious conventional assumptions on the general nature of online language learning, and thereby enable informed, self-regulated, and potentially effective individual learning processes. This research is situated in a recently completed pilot project called The Professional English Workbench, which involved task-based group formation and a rubric-based multi-cyclic (self- and hetero-) evaluation process that aimed at eliciting and enhancing the use of metacognition. As explained in the article, this project was undertaken by volunteer students from a number of subjects related to professional English in three Tourism subjects at UNED (according to a tertiary distance education institution which uses a blended learning methodology).
methodology focusing on online learning via its virtual platform). Both the mechanics of the project and the analysis of the results are presented, making reference to the initial research questions, which were related to the students’ view on the collaborative tasks undertaken and the potential improvement of metacognitive competence in the context of the whole second language learning process.

**Keywords:** Professional English, Computer Assisted Language Learning, collaborative and project-based learning, metacognition and multi-cyclic evaluation.

**Palabras clave:** inglés profesional, aprendizaje de lenguas asistido por ordenador, aprendizaje colaborativo y basado en proyectos, metacognición y evaluación multi-cíclica

1. **INTRODUCTION**

Language teachers have devoted a lot of effort in the last couple of decades to promoting autonomous learning (Allford and Pachler 2007; Eneau and Develotte 2012) and, to a lesser extent, to the use of metacognitive strategies by students (Naiman et al. 1996; Sáiz et al. 2012). Both concepts are closely related and present in all fields in education. In particular, there is a substantial body of literature related to learner autonomy in the field of languages (Dickinson 1987; Ciekanski 2007; O’Rourke and Carson 2010) and also to the role of metacognition and the development of metacognitive strategies within this field (Oxford 1990; Graham 1997; Bozorgian 2012).

Learner autonomy has been referred to as the ability to take responsibility for one’s own learning (Holec 1981; Victori and Lockhart 1995). This ability, however, is not generally innate and needs to be promoted through the development of cognitive and metacognitive competences and specific strategies, so that students can gradually approach their learning in a truly self-sufficient and self-controlled way. While the concept of autonomous learning is commonplace among most teachers, metacognition, which was once simply but eloquently defined as “thinking about thinking” (Lei 2002:2), receives less attention among these professionals, despite the fact that we engage in metacognitive activities all the time in order to succeed at tasks in our personal and professional lives, for
instance when we take up a new, challenging activity and ask around in the hope that other people’s tips will make it more feasible, or when students notice that they have more difficulties learning A than B and should practise the former more intensively. However, there is enough evidence of the benefits of incorporating metacognitive episodes in the learning process (Clark 1978; Horwitz 1987; Freeman 2001) to encourage teachers to design projects, tasks, activities and the like that enhance the engagement in them.

The study presented here shows the results of The Professional English Workbench (henceforth, the PEW)\(^1\) research project, which was recently undertaken by the authors to help distance university students in the development of their metacognitive competence and the application of self-awareness and introspection strategies in the study of professional English (henceforth, PE). The PEW had a double cognitive goal: firstly, to produce annotated electronic catalogues of free Web resources (e.g., Computer Assisted Language Learning (henceforth, CALL) programs, language corpora, etc.), for the development and online practice of the different communicative competences and processes that intervene in PE learning as per the Common European Framework of Reference for Languages: Learning, Teaching, Assessment (henceforth, CEFR; Council of Europe 2001): lexicon, grammar, listening, writing, etc. The second goal was to work collaboratively in English, with the aim of practising written interaction in this language.

Furthermore, the PEW had a twofold metacognitive goal: firstly, in order to test Web-based tools and programs which are suitable for the development of specific aspects of PE learning, students were expected to engage in a metacognitive episode in order to reflect upon the applicability and usefulness of each resource to online PE learning, both individually and then collaboratively, and to make the results of their evaluation explicit by filling out a rubric template. Secondly, students had to engage in a similar metacognitive episode in order to evaluate the work produced by their peers, improving/completing the information if necessary. It should be noted that, for this project, two evaluation cycles were established, but the process could have been applied iteratively to cover more than one or two language aspects.

\(^1\) The research described in this paper was undertaken during the academic year 2011-12 in the context of the Networks for Teaching Innovation Program of the Vice-chancellorship of Research of UNED and the SO-CALL-ME project, funded by the Spanish Ministry of Education (FFI2011-29829).
2. THEORETICAL FRAMEWORK

There has been a noticeable shift from the abundance of methods and approaches in language teaching that characterized most of the 20th century to the current post-method and constructivist era that promotes the redundant sounding formula of ‘learner-centred learning’ (Kumaravadivelu 2001; Nunan 1998; Richards 2001). This is particularly evident in LSPs (Languages for Specific Purposes), where contents and instruction are usually expected to be firmly adapted to meet learners’ occupational and/or academic needs (Hutchinson and Waters 1987). There are, however, still many language teachers that decide to follow a specific didactic method, technique or approach, mainly the well-known Communicative Approach (Richards and Rodgers 2001) or the Action-oriented Approach (Reason and Bradbury 2001) put forward by the CEFR. Kumaravadivelu (2001) is the main advocator of the so-called post-method and advises teachers to focus on the specific social context of the classroom and analyze their own students’ cognitive needs. This follows the footsteps of Constructivism, in that it minimizes assumptions on both the nature and the path towards effective learning, and is centered in the learner’s own profile, background and experiences, capabilities and limitations, personal learning styles, and consequently, the related cognitive (and metacognitive) strategies that optimize all of the above.

Constructivism (Piaget 1980; Glaserfeld 1989) is founded upon the premise that students acquire knowledge through their personal reinterpretation of the learning process and their own previous knowledge, experience and beliefs. Steffe and Gale (1995) identified up to six core modalities of Constructivism: Social Constructivism, Radical Constructivism, Social Constructionism, Information-processing Constructivism, Cybernetic Constructivism, and Sociocultural Constructivism. What all six have in common is the key role of interaction in the emergence, development and consolidation of knowledge. Of all six, Social Constructivism (Vygotsky 1978; Palincsar 1998) has proven so far to be the most relevant paradigm for language teaching and learning, given its inherent social, communicative and interactive dimension (Bárcena 2009). Furthermore, Social Constructivism has triggered the implementation of collaborative strategies in online environments, since research evidence shows that they provide a real sense of community, which is superior in many ways to the classroom, and sustained and reinforced every time a collaborative project is undertaken (Meng 2006; Brindley et al. 2009). Social Constructivism is, therefore, having a profound impact on the teaching methodology used for languages online (Dudley-Evans and St. John 1998; McGroarty 1998; Firth and Wagner 2007). This has, in turn, permeated to restricted linguistic domains, where the learner usually has specialized subject matter capabilities which, following the building metaphor, serve as the existing mental
Metacognition, according to Flavell (1979, 1987), is a form of high-order thinking that belongs within the list of mental capabilities that have been acknowledged to play a key role in meaningful learning, such as reasoning, justifying, comparing, contrasting, illustrating, etc. (Bárcena 2009) – and also personality development, social interaction, reading, oral skills, writing, language acquisition, etc., to name a few. If experts assume that metacognition has a positive impact on learning (Nunan 1997), it is important for teachers, course designers, materials developers, etc., to determine how learners can be guided and encouraged to better apply their mental resources to understanding, problem solving, etc., through metacognitive control. In particular, metacognition is to be viewed by educators as a key aspect in the process of construction of the students’ own knowledge and its significance (Bednar et al. 1992; Meng 2012), and teaching practice should, therefore, aim at activating, supporting and enhancing their own construction of meaningful knowledge using their existing cognitive structures (Perkins 1992; Meng 2006). Examples of metacognitive processes include undertaking independent brainstorming, planning how to approach a given learning task, monitoring comprehension, and evaluating progress toward the completion of a task (Livingston 1997).

Evaluation can be taken as a first order metacognitive strategy, particularly if it is preceded by (pre-)planning and monitorized execution phases, and explicitly decomposed or broken down into significant sub-processes and criteria (as per a rubric), and applied to oneself and/or others (Choi 2006). Figure 1 presents a functional model, developed by the authors and adapted from Costa (1985), which presents the decomposition of metacognitive learning. As such, it is an abstraction, since metacognition is not put into practice as a strictly linear process that moves systematically and unidirectionally from planning to evaluating. More than one metacognitive process may take place at the same time, and the learner’s mind may be revising their previous decisions while considering the next ones. Furthermore, metacognitive and cognitive strategies interact, and most learners constantly move backwards and forwards from one to the other during the learning process.

---

2 This model was included in the documentation of the virtual community used in the PEW, and was preceded by a brief explanatory paragraph to inform students about the advantages of metacognitive learning and how they could put it in practice in the project.
The rationale behind developing metacognition in language learning (henceforth, LL) is closely linked to the concept of learner-centred learning and the application of psychodidactic constructivist principles. The concept of metacognition has gained relevance in LL in the last few decades (Cohen 1998; Macaro 2006), and empirical research has been undertaken that directly link LL success to the development of metacognitive competence (Victori and Lockhart 1995; Nunan 1997; Fazeli 2012). The CEFR also shows the importance of developing communicative language strategies along with “a certain linguistic awareness”, a process that “can be seen as the application of the metacognitive principles: Pre-planning, Execution, Monitoring, and Repair Action to the different kinds of communicative activity: Reception, Interaction, Production and Mediation” (57), taking into consideration that the development of communicative language proficiency involves dimensions and capabilities other than the strictly linguistic. Teaching a language with a focus on metacognition involves helping the student identify the strength of their cognitive capabilities, their epistemological gaps and the fuzzy borders between both, as well as their own learning style, preferences and needs, through feedback, questionnaires, checklists, tests, oral recordings, etc., planning classroom and homework tasks, gathering and organising materials that enable self-introspection, and guiding them towards regular error monitorization and (self-)evaluation (Oxford 1990).

For social LL projects, the authors propose a functional model of metacognitive learning (see figure 1), which defines a three-stage metacognitive process for each of the cycles/phrases of a given project:

---

12 ELENA BÁRCENA, ELENA MARTÍN-MONJE & NOA TALAVÁN

Planning: in the first stage, students would prepare for and plan their learning activity, reflecting upon their current knowledge and experience in relation to the specific learning goal and the means available to undertake it (e.g., selecting and using a CALL resource).

Monitoring: in the second stage, students would monitor their own progress during activity execution, being attentive to any improvement in their own knowledge/formance, and considering its potential suitability for other students with different learning styles (for example, thinking about the target user profile of the program/resource and how to optimize its use).

Evaluating: in the third stage, students would engage in collaborative evaluation, exchanging and contrasting their views with those of others who, in turn, would generate partial modifications that would lead to further discussion/negotiation.

Now that a theoretical framework has been proposed, in the following sections a collaborative online project recently undertaken at UNED (the Spanish national distance university) by the authors is described, where this framework can be applied. Following socioconstructivist principles, the project involves collaboration and task-based group formation, as well as a rubric-based multi-cyclic (self- and hetero-) evaluation process aimed at eliciting and enhancing students’ metacognition. Both the mechanics of the project and the analysis of the results are presented, making reference to the following research questions: Which aspects of the project did they value the most/least, including the collaborative tasks and the evaluation stages? Did they manage to improve their metacognitive competence?

3. METHODOLOGY

The work undertaken in the PEW is related to the concept of action research (Lewin 1946). This author claimed that the three major features of modern action research are its participative nature, its democratic impulse, and its contribution to knowledge in social science. The starting point for the research described here was the observation of the existence of limitations and shortcomings in the long-term assimilation of the contents in distance education university language courses, particularly of PE, namely, in the way that the knowledge and capabilities allegedly acquired during a given course were subsequently put into practice creatively in real communication. The authors claim that part of the problem is related to the lack of metacognitive practice on the part of students. Given the formal distance learning scenario and the online environment and tools usually available in such institutions,
the authors decided to explore the potential of a collaborative project that should elicit and enhance a central metacognitive component as a determining effect on the entire LL process. This experiment is described below.

3.1. THE PROCEDURE

The PEW project took place over a period of twelve weeks (which is roughly the length of most subjects (and language courses) in UNED). Students were offered the possibility to join one of five working groups to search for (preferably free) online programs, tools and resources, and produce annotated catalogues that would complement the training of one of the capabilities/processes covered in their respective courses. Therefore, each group had to focus on one specific linguistic aspect of their interest, namely: vocabulary, grammar, speaking and listening, reading comprehension or written production, depending on their own interests. The topics that each group was to cover were the following: travelling (travel agencies, tourist guides, tours, etc.), accommodation (hotels, private rental, etc.), catering (at different levels: restaurants, bars, home delivery catering services, etc.), entertainment (shows, sports, games, indoor and outdoor leisure activities, etc.), environment (the climate, landscape and wildlife, sustainable tourism, etc.), culture (art, history, intercultural communication, etc.), and management (economy, business, marketing, media, contracts, etc.), all of them part of the compulsory syllabus of the course.

The procedure that participants were asked to follow was organized in five different stages: registration and group formation, data collection and evaluation, access to other groups’ work and informal group discussion, peer-to-peer (henceforth, P2P) evaluation, and final general discussion.

- In the first stage (week 1), students were offered the possibility of participating in a collaborative project, told what they were expected to do, the potential benefits, etc., and invited to register by both filling out an online form with their name and academic details, and undertaking a questionnaire about their linguistic, didactic and technological profile and their expectations regarding the project (see call for participation and instructions for phases I and II of the project in appendix 1). As seen above, group distribution was done according to the students’ preferences on the linguistic aspect that they wanted to work on. However, in order to avoid imbalances in the size of the groups, and ensure a breadth of coverage, they had to prioritize their choices. After group distribution was completed, the students were asked to become acquainted with their group in the wiki, read a brief document with recommendations about the use of...
metacognitive strategies based on the model developed by the authors, and discuss it together.

- In the second stage (weeks 2-5), students were asked to collect a set of tools and materials from the web that they considered, at first sight, to be potentially useful for the development of the assigned linguistic capability. They had to work collaboratively in their corresponding group: gathering materials from the Web, trying them out and, if potentially useful, presenting them to their peers for consideration. The whole group would then proceed to discuss the level and user profile of each resource, how to optimize their use, etc. Once consensus was reached, the student who proposed the item would fill out a rubric template (previously provided by the teachers; see appendix 2), to reflect a synthesis of the group’s views, and store it in a shared folder in Google Drive. The students took turns in the process for each resource identified, in order to ensure an even distribution of work.

- In the third stage (weeks 6-7), the students had a period of two weeks to read the catalogue that had been produced by the other four groups and made available in Google Drive. They were also asked to experiment with the tools in it and discuss their opinion about them within their own group.

- In the fourth stage (weeks 8-11), each group was assigned a catalogue previously elaborated by one of the other groups (which was designed for a different linguistic aspect from the one they had been working on in the first part of the project). The main goal of this stage was that the students collaboratively evaluated the catalogue and the information contained therein (following the same guidelines as per the first phase) and improved it either with new items and/or more additional descriptions.

- The fifth and final stage (week 12) was included so that the students would fill out a final questionnaire about the project. It was also intended to provide a brief extension period in case there were unforeseen delays. Since there was no postponement of deadlines none during the experiment, in this final week students were invited to use the common PEW forum to express their personal views and impressions on the project, particularly its usefulness (specifying the nature of any progress observed) and any suggestions for future editions (see appendix 3 for a sample of the students’ messages in this regard).

3.2. THE PARTICIPANTS

The students involved in the PEW pilot project were the first 50 volunteers to register, who came from three different but related English subjects in the Tourism...
degrees at UNED, who had registered in the corresponding online form, after receiving the call for participation from the teaching team (see appendix 1). Of these students, 76% belonged to the Inglés Profesional (Professional English) subject of the new Degree in Tourism, 20% came from the Lengua Inglesa I (English Language I) subject and only 4% came from the final Trabajo Fin de Carrera (Final Degree Project), both from the now phased-out Degree in Tourism. This was expected, as PE was by far the largest subject of all three.

Although the required language level of the first two subjects was A2+ and that of the latter was B2+ this did not pose a problem, since the students volunteering were those who already have a level above the group’s average, which in the authors’ experience is the trend in voluntary participants of this type of optional projects.

Ninety-four percent of the students came from different Spanish regions. There were 6% non-Spanish natives (Romanian, Ukrainian and Italian), and no English native (or quasi-native) students that could have taken the lead in the project or affected the results. 80% of the students were female (a slightly higher percentage than in the respective subjects) and their age was between 23 and 49 years old, the average being 34.

3.3. THE COLLABORATIVE ENVIRONMENT

The PEW project was undertaken in UNED’s e-learning platform aLF (see figure 2 for a snapshot of its interface), which is assumed by the authors to be appropriate for the present research work: while this environment allows for efficient student-student collaboration through its many collaborative tools (forums, wiki, etc.), the physical separation of each student facilitates self-introspection and control. Pastor et al. (2010) provide a description of aLF in relation to the challenges involved in distance education:

---

3 Given the highly open nature of Tourism as an LSP (language for a specific purpose) in general and these subjects in particular, the authors of this article do not consider that the study domain conditions or confines this research to a certain language variant. However, given the small-scale dimensions of this pilot project, further research would be necessary to provide evidential support for this claim.

4 This number was considered to be adequate for the purposes of the project, as it enabled close observation by the researchers. Furthermore, participation was to be voluntary to enhance student involvement and motivation.

5 All the percentages in this study have been rounded to the nearest whole number to facilitate following the trends in the data.
The development of aLF has been focused on two aspects: the addition of collaborative interaction tools (first problem) and to provide several workspaces where to share information from different groups, classes or communities (second problem). So, from the user’s viewpoint, aLF provides a large variety of tools organized around three clearly distinguished workspaces: a personal one, the communities (to which the user belongs) and the courses (being undertaken by the user).

Within aLF, a dedicated community was created for the participants in the project, and the documentation was uploaded, a forum was opened for the final informal discussion stage, and a wiki was used throughout the project for group work. Forums have been widely acknowledged as an advantageous way to supplement classroom discussion in distance education contexts, and they are even used to complement face-to-face courses to promote critical thinking, knowledge construction and learning autonomy (Lim and Chai 2004). Wikis are “naturally suited for collaborative on-line projects” (Godwin-Jones 2003:15), and in particular LL projects since, as Bax (2003) observes, this technology can be easily integrated into the syllabus of a language course, as it relegates the teacher’s role to that of a facilitator (leaving the students as the protagonists of pro-active LL). Furthermore, wikis stimulate frequent interaction, interpretation, criticism, evaluation, comment and thought. With these considerations in mind, the wiki tool in aLF was adopted for this research project. However, the difficulties of uploading and sharing documents in the wiki soon became apparent, which led the teachers to use Google Drive.
For both phases of the experiment, a rubric was provided by the teaching team, with key predefined criteria aimed at ensuring the breadth and depth of the activity and its undertaking in an introspective, self-regulated manner (see appendix 2 for the rubric used and the five criteria therein: content, descriptive summary, grammar, vocabulary, and structure and organization). As Goodrich (1996, 2000) notes, educators can enhance learning when they go beyond the most basic application of rubrics by seeking out and including thinking-centred criteria, and by engaging students in serious self–and peer assessment. As this author remarks: “Blurring the distinction between instruction and assessment through the use of rubrics has a powerful effect on your teaching and, in turn, on your students’ learning” (2000:16).

3.4. THE DATA COLLECTION TOOLS

The PEW had two main sources of information: questionnaires (before and after the project) and observation (direct and indirect). They were both structured to provide similar data that could be reciprocally checked. Questionnaires were selected as the main source of information as they are the most widely used research tool in social sciences (Robson 2002). Two questionnaires were used: the first one was designed to carry out a study of the participants’ profile, LL practices and project expectations, while the second questionnaire was used to learn about the participants’ opinions regarding the usefulness of the activity overall, the metacognitive development and the LL improvement achieved.

Following Robson’s (2002) questionnaire typology, the PEW used online self-completion questionnaires with a mixed design, where most of the questions were closed (multiple choice), and one or more open questions were included at the end. Both questionnaires were designed with the following general criteria: single-topic; brief and concise; with clear and simple language; positively formulated; and avoiding excesses (neither too general nor too detailed), guidance in the answers, and superfluous elements that could complicate the analysis unnecessarily. They were piloted with a small sample of participants before administration and a series of modifications in the design were introduced.

As for observation, it is very valuable in order to describe the participants, their attitudes, problems and achievements in this type of educational research framework, by using the teachers’ valuable experience and, thus, supplement the results obtained through other means. One of the researcher’s goals is to identify aspects of an experiment that could be suitable and worthy to follow in subsequent analysis. It should be evident by now that in the PEW, the authors adopted the role of both participants (as teachers) and observers (as researchers) and, in Lindlof’s
words, “enter[ed] a field setting with an openly acknowledged investigative purpose, but [were] able to study from the vantage point of one or more positions within the membership” (1995:144). Two types of observation were used: direct and indirect. The former was undertaken through daily note taking on the students’ progress in the wiki and, to a lesser extent, their activity in the community. The latter, which was of a secondary nature, was undertaken through the analyses of other occasional types of rapport between the participants (email, phone calls, etc.).

Figure 3. Students’ timed response to the call for participation.

4. DATA ANALYSIS AND DISCUSSION

A total number of 34 students participated in the project from beginning to end (after an expected gradual dropout of 28% — a common characteristic of distance learning projects that is not to be penalized). The subjects showed a highly positive attitude from the start. The students’ eagerness to participate was reflected in the haste shown to register: the immense majority of the group did it within the first 72 hours of the period provided, several days before the deadline, as shown in figure 3. Filling out the first questionnaire was part of the registering process. The final questionnaire was also filled out by most of the participants in a period of 72 hours.

The students’ engagement in the experiment can also be judged by the high number of messages posted in the wikis, as reflected in table 1:
As for the volume of the catalogues (see table 1), some groups added more items than others, something that, according to the students, was severely conditioned by the availability of programs and tools in the Internet. It should also be noted that little interaction took place in the Oral Skills group, where discussion and negotiation were sometimes reduced to consent after individual work. The lack of experience of students with online LL was more evident with oral resources and had a negative impact on the attitude of the corresponding group.

Before the project, the students considered their own level of English to be “acceptable” (58%, i.e., 3 in a scale of 0 to 5), and no one declared it to be “elementary”. Their view on their own capabilities is shown in table 2 below:

![Table 2. Students’ scores in their own communicative language capabilities.](image-url)
As can be seen in table 2, the students’ views of their own level in the different linguistic aspects considered for the PEW coincided almost 100% with both their learning needs (see figure 4) and expectations for the project (see figure 5), which showed the students’ thoroughness in doing the questionnaire task and, accordingly, the reliability of the results obtained. It is to be noted that the result of the addition of the scores in all the linguistic aspects also roughly coincides in proportion to the result of the single question on the students’ view of their overall English level (5 on a scale of 0 to 10; see table 2).

Students declared that they needed to improve the following aspects: oral production (92%), written production (60%), oral comprehension (58%), grammatical competence (57%), lexical competence (56%), and reading comprehension (24%). Their expectations about the project were very highly conditioned by their perception of their own PE capabilities and needs and, accordingly, as shown in figure 5, the majority were motivated to participate in the PEW for LL, rather than for the experience of engaging in a collaborative project (51%) or for improving their digital skills (20%). The collaborative work as such was a novel type of experience that did not attract the students’ attention in itself.

These answers can be partly explained by acknowledging the fact that the way they practiced PE was mainly through unidirectional resources, such as audiovisual materials (such as films, video) (72%), the Internet (64%), conventional LL materials (56%) and taught courses (44%) (see figure 6). Only 32% said that they had the opportunity to travel abroad and 28% to speak with non-Spanish natives.
During the project, the students worked as scheduled, with high academic rigueur (their messages in the wiki and the debate generated showed evidence that they tried the tools for themselves) and respect (there were no confrontations within...
the groups), and produced catalogues which were acceptable in size and depth, although they contained a considerable number of formal mistakes (mainly to do with grammar, spelling and punctuation). As expected, there were complaints from a few students, who occasionally made their impatience apparent when they felt disoriented, confused or misinformed about where to find the project documentation and what they were expected to do; how and when they were going to receive some kind of compensation in their subject grade for their participation in the project; insufficient time to undertake the tasks; the absence or lack of diligence of their group peers; and they even showed frustration when they encountered difficulties in finding tools suitable for the competence they were working on.

After the project, students expressed that the experience had been useful to practise writing skills, particularly reading comprehension, rather than the oral ones, the lowest being oral production. On the assumption that virtually any linguistic activity can actually help improve an individual’s communicative language competence to some extent, students were asked to reflect (on a scale of 0 to 4) upon the extent to which each specific linguistic communicative competence/process had been developed in their own case. The results can be seen in table 3 below:

<table>
<thead>
<tr>
<th>LEVEL OF IMPROVEMENT/ LINGUISTIC ASPECTS</th>
<th>GREAT</th>
<th>FAIR</th>
<th>SOME</th>
<th>LITTLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>READING</td>
<td>30%</td>
<td>60%</td>
<td>10%</td>
<td>0%</td>
</tr>
<tr>
<td>WRITING</td>
<td>30%</td>
<td>60%</td>
<td>10%</td>
<td>0%</td>
</tr>
<tr>
<td>LISTENING</td>
<td>10%</td>
<td>30%</td>
<td>40%</td>
<td>20%</td>
</tr>
<tr>
<td>SPEAKING</td>
<td>10%</td>
<td>40%</td>
<td>40%</td>
<td>10%</td>
</tr>
<tr>
<td>LEXICAL</td>
<td>50%</td>
<td>30%</td>
<td>20%</td>
<td>0%</td>
</tr>
<tr>
<td>GRAMMATICAL</td>
<td>20%</td>
<td>70%</td>
<td>10%</td>
<td>0%</td>
</tr>
</tbody>
</table>

Table 3. Students’ analysis of their own linguistic improvement.

These results were partly due to the written interaction within the project, and partly to the higher number of tools and resources found by the groups that involved extensive reading. It is rather significant that the students who worked on grammar

---

6 The teachers had foreseen the possibility of assigning a student monitor to each group if social conflicts or misunderstandings arose.
and vocabulary built up catalogues of written (with occasional audio) resources. It should be noted that, despite the fact that these results were different from the initial goals (see section 3.2), the students found the experience worthwhile as a whole for LL: 80% approx. found the PEW useful selecting 3 on a scale of 0 to 4, 8% found it very useful selecting 4, and 12% found it little useful selecting 2.7

As for the students’ expectations about learning PE collaboratively, before the project they generally showed a mildly open and positive attitude, although somewhat indifferent, towards engaging in this type of experiment (despite the fact that 68% of them had never participated in a collaborative project before, 12% only in one, and no one in more than two such projects). This lack of previous experience was interpreted positively as a levelling factor between the students. Again, in the course of the project students changed greatly regarding their view of the collaborative experience. Not only did they find the tasks enjoyable and well organised, they also declared that the collaborative evaluation of the selected digital resources had helped them become more reflexive, aware and introspective about their LL. They considered the collaborative work to be a most fruitful learning experience which had surpassed their initial expectations, as reflected in figure 7 (50% selected 3 on a scale of 0 to 4, 30% selected 4, 10% selected 2 and 10% selected 1).

![Figure 7. The students’ evaluation of the impact of the social work on their LL.](image)

7 Due to the heterogeneous nature of the participants and of the project tasks, linguistic progress was not evaluated by the teachers-researchers.

The eight methodological aspects that the students considered useful, to various degrees, were the following (ordered from highest to lowest):

- Being instructed to be inquisitive about their own learning.
- Being guided by the teacher and receiving their feedback and reassurance when requested.
- Using a rubric provided by the teachers to undertake the initial part of the project.
- Having their own messages and project production corrected/revised by their peers.
- Reading their peers’ views in the wiki/forum.
- Having an organized P2P evaluation system.  
- Helping others with their doubts and queries.
- Using a rubric to evaluate their peers’ work.

As can be inferred from this list, firstly, the majority of the students valued the explanations and guidelines that were explicitly provided by the teachers in the PEW community. Secondly, the list also shows that there was a great dependence on the teacher’s role, expertise and authority, since it was the aspect with the second highest consideration and, with no exception, all the students preferred teacher to peer evaluation (there were messages in the forum confirming this; see appendix 3). Thirdly, the students expressed a strong preference for receiving peer help, rather than providing it. This apparent selfishness revealed their unawareness of the “Learning by Teaching” approach, i.e., the positive cognitive and epistemological benefits of transferring knowledge and skills to their peers (Gartner et al. 1971), which is at the core of collaborative learning. Fourthly, the students rated the application of the rubric to their peers’ work low, in comparison to the rest of benefits of the project. Since the use of the rubric in relation to their own work was rated high, this datum could be due once again to their unawareness of the positive effect of hetero evaluation for learning progress or, more importantly, to the fact that Spanish students feel uncomfortable judging the work of others, which is a commonly observed phenomenon with deep social and cultural roots.

Before the project, the students expressed their confidence about their computing abilities at user level (92% considered themselves to be above average and none declared themselves to be computationally illiterate) and did not appear to have any interest in developing their digital skills further in the project. An important finding was that they were regular computer users (82% said that they

---

8 It must be noted that when asked if they would rather have P2P evaluation on its own or as a complement of the teacher’s evaluation, every single student in the experimental group selected the latter option.
used computers at least once a week and only 12% of them did so occasionally). This familiarity was interpreted positively as it ensured that technical complexity would not interfere with the execution of the project (as was the case). It also justifies the students’ indifference for developing their digital skills any further. During the project, there were not any significant technical difficulties on their part. After the project, the seven technological aspects that they considered useful, to various degrees, were the following (ordered from highest to lowest):

These results closely reflected the use that the students made of the different technologies during the project and their experience with them: the more the students used them, the higher they were rated. The aLF platform, for example, is used on a daily basis for both academic and administrative purposes by UNED students, so they are extremely familiar with it. For most of them, however, it was the first time that they belonged to a separate community within a course subject, although the interface was merely a simplified version of the general platform. In particular, the students expressed their disappointment with the wiki for not allowing the uploading of documents and found it rather cumbersome to have to go to the cloud to access and modify the catalogues. Regarding the Internet, the students expressed how interested they were by the enormous amount of free resources that they found for the practice and development of certain communicative language competences and processes, although they also declared being somewhat overwhelmed and confused by such abundance. As for the wiki, more than half (58%) of students had never used one and found its use easy and intuitive. As for the other communication tools, the low score in the final questionnaire was probably due to the fact that they were hardly used during the project.

Regarding the methodology of the PEW, it should be noted that triangulation was achieved in the students’ questionnaires and messages and the teachers-researchers’ observation, which enhances the reliability and validity of this qualitative piece of action research. Furthermore, regarding the metacognition and collaboration aspects of the research, it must be emphasized, firstly, that after undertaking a project with such extensive metacognitive engagement, the students considered that they had made a qualitative improvement in their communicative language competences, but in inverse order to their initial expectations. This fact revealed certain previous naivety on the part of the students, who were expecting to develop oral and productive skills in a working environment that is eminently written, complemented with CALL tools and resources which involved considerable reading and were, in general, more receptive than productive.

Secondly, for the majority of students, this was the first experience of using the English language creatively, away from mechanical formal rule application, as a vehicle for (academic) communication in a realistic context (as a means and not only as an end). Furthermore, the majority had not participated in collaborative

*ES. Revista de Filología Inglesa* 35 (2014): 7-39
projects before, so many acknowledged their lack of familiarity and expectations about social learning. Undertaking an online collaborative language project metacognitively revealed to the students the specific epistemological value of the social component of such projects, and helped them distinguish the implications of the social learning tasks from those of the individual ones. However, the students in general did not rate the social aspects of the project as highly as the individual ones, since they continued to value, firstly and foremost, teacher feedback and evaluation over P2P. Furthermore, the students claimed to prefer receiving input from their peers, rather than providing it to them, thereby failing to grasp the inherent benefits of collaboration. As for the technological dimension of the project, the students claimed subsequently to be more aware of both the functionality and the didactic value of each technology used and, as such, their comments about technical questions became more accurate as the project proceeded.

5. CONCLUSION

This paper explored the impact on PE learning of a collaborative online project with a major focus on metacognition. One of the goals of the project was to elicit student introspection about their LL process and awareness of the significance of such introspection. The authors predicted that, in the context of online LL and specifically collaborative projects, this would be achieved via the explicit exposure to a three-phase Planning-Monitoring-Evaluating functional model of metacognitive learning (adapted from Costa 1985), the undertaking of conventional individual tasks like filling out questionnaires, and also through social tasks (like the rubric-based multi-cyclic evaluation of LL resources proposed). After the experience, the students declared that they had changed many previous misconceptions about the nature of LL and, in particular, online LL, and felt more confident, independent and in control of their own learning, and more ready to make a real, creative use of the English language. The authors agree that after the project there was evidence that students had improved their linguistic awareness, metacognitive perception and critical judgement capacity towards LL and use.9

9 Language improvement was beyond the scope of this study, and was, therefore, not measured (although it was informally checked by the authors that all the students who had participated in The PEW passed their English language subject in the final exam that took place after the project).
The authors of this article have advocated the use of metacognitive strategies in LL, which may be commonplace practice to some students, but is still something alien and even unheard of to many others. The volume of evidence in support of metacognitive LL makes the teaching of relevant skills a valuable use of instructional time for second language teachers, as a sort of didactic scaffolding mechanism, until students can select the most suitable metacognitive strategies, adapt them to circumstances, combine them creatively, etc., according to their learning styles and goals. If strong metacognitive skills empower second language learners, online education teachers are required to provide alternatives which are, at least, as efficient as those of their classroom-based colleagues.

Technological and methodological advances enable the design of online LL projects that allow students to access explicitly (metacognitive) learning models, undertake practical individual tasks and, most importantly, engage in collaboration, where the sheer physical isolation of each student is expected to foster self-introspection and control. As with any scaffolding mechanism, early project designs have to be subsequently substituted by others, as evidence of student epistemological, cognitive and metacognitive development is shown, rendering them to play increasingly more independent and creative roles in their own LL process. This iterative teaching procedure requires a way of measuring metacognitive ability and the implications and ultimate effectiveness of each type of strategy in second language progress. As Camillo (2011:7) pointed out, “observing the unobservable raises challenges for research on both metacognition and language learning”. These are all important questions that still require an answer.

REFERENCES


## APPENDIX 1. CALL FOR PARTICIPATION AND INSTRUCTIONS

**CALL FOR PARTICIPATION – INSTRUCTIONS FOR PHASE I OF THE PEW PROJECT**

Dear students,

The teaching teams of the subjects *Inglés para Fines Profesionales (Grado de Turismo)*, *Lengua Inglesa I* and *Trabajo Fin de Carrera* (both from the *Diplomatura de Turismo*) have jointly set up a collaborative project for you to participate in. We believe that, among other things, it will enhance your interactive skills in English and, more importantly, **it will give you an opportunity to reflect upon your Professional English learning process and ultimately take control of it**! This is a two-phase project and for the first phase you are asked to identify a set of (preferably free) tools and materials from the web that you consider useful for the development of a particular communicative language competence and build up an annotated catalogue with those items. You may also design your own materials and tools if you feel up to it!

You will be divided into small groups and use aLF’s wiki (in the case you don’t know, aLF is the name of UNED’s LMS, where all your courses and communities are located). The set of tools and materials that you’ll present at the end of the project must be the result of discussion and collaboration between all the members of the group. You will be evaluated both for the way you undertake such collaboration (in English, of course!) and for the quality of the tools and materials selected (especially the accompanying descriptive summary, which must contain a short but detailed description (between 50 and 150 words) of the nature and use of the materials and an evaluation about their effectiveness – after having experimented with them, of course!).

In the second phase of the project you will be given the catalogue developed by a neighbouring group (which will be for a different communicative language competence) and you will have to both evaluate it and add to it new materials and/or complementary descriptive summaries.

Participation in this project is, of course, optional and only the first 50 students who register for it will be able to take part. If you decide to participate, you will not only have fun participating in an interesting project, but you will have a great opportunity to improve your English, be rewarded with up to 1 point in your final mark… AND you will be granted 2 free ECTS credits (libre configuración). Only those who complete the project will be evaluated and the catalogues will be permanently available in the virtual course for you, your peers and future students to use. As you can see, it’s well worth taking part!

You will receive help from the teaching team (there’ll be a dedicated community in aLF with the documents that you need for the project (such as a tree diagram which includes the sort of questions that you should be asking yourself, a rubric template to build the annotated catalogues and a sample of the type of brief description that you are expected to provide for each resource) and a forum for you to ask all sorts of methodological and technical questions, should you have any, and you will not be penalized in any way for unsatisfactory work, mistakes, etc. Once you start, we would, however, request you not to drop out of the project since it will negatively affect the other members of your group.

---

*ES. Revista de Filología Inglesa 35 (2014): 7-39*
If you decide to participate in this project, you should do the following:

1. Fill out the form provided by the following link before March 13th:
https://spreadsheets.google.com/viewform?formkey=dDdiRG9BUzFQR3BwOTJCVTF0dFVRVne6MQ
2. Fill out the initial personal questionnaire that you will find there by March 21st. 
   **It is crucial that you take time to reflect upon your own Professional English learning and how to make the most of this project as a learning experience.**
3. If you are one of the first 50 to register and, therefore, admitted to the project,
you’ll be added to its virtual community. You’ll also be assigned to a group and a
communicative language competence after your preferences have been taken into
account. Join the group and get acquainted with your partners. You must also
carefully read the Metacognitive Strategies document that can be found in the
PEW online community and discuss it with your new group peers in the wiki.
4. Start working collaboratively with your group from March 22nd onwards for a
   period of 4 weeks. Note that you may organize yourselves in any way you like
   (we suggest that the member who proposes a given item should be in charge of
   elaborating the description – try to take it in turns so that the workload is even).
   For that purpose, you must fill out the evaluation template (rubric) that you will
   find in the PEW community with the group’s opinions.
5. Upload the final document (a commented list of tools and materials) to Google
   Drive by April 19th.
6. Between 20th and 27th April you should try out the tools in the catalogues built
   by the other groups.
7. On April 28th, for the next four weeks, take the list elaborated by the group
   working on the next competence down from yours (in the list below, for example,
   if you are working on Lexical competence then move onto Grammatical
   competence; if you are working on Writing competence, then move onto Lexical
   competence, and so on) and try to improve it in any way you consider pertinent
   (more tools, better descriptions, etc.). Do so collaboratively, as per the first part of
   the project.
8. Upload this improved version by May 27th.
9. Fill out the final personal questionnaire by June 3rd. **It is crucial that you take
time to reflect upon what you (and others) have found useful in the project and what impact it has had on your professional English.**

You will be assigned ONE of the following competences:

1. Lexical competence
2. Grammatical competence
3. Oral competence (both receptive and productive)
4. Reading competence
5. Writing competence

The real world domains that you must cover (ALL of them) are the following:

1. Travelling
2. Accommodation
3. Catering

*ES. Revista de Filología Inglesa* 35 (2014): 7-39
4. Entertainment (including shows, games and sports, indoor and outdoor leisure activities)
5. The environment (including climate, landscape and wildlife, sustainable tourism)
6. Culture (including art and history, intercultural communication)
7. Management (including business and economy, marketing and the media, documentation, insurance, contracts)

Please note the following sequence:
1. Those of you who work on Lexical Competence will evaluate the work undertaken by the Grammatical Competence Group.
2. Those of you who work on Grammatical Competence will evaluate the work undertaken by the Oral Competence Group.
3. Those of you who work on Oral Competence will evaluate the work undertaken by the Reading Competence Group.
4. Those of you who work on Reading Competence will evaluate the work undertaken by the Writing Competence Group.
5. Those of you who work on Writing Competence will evaluate the work undertaken by the Lexical Competence Group.

The following articles contain useful information to undertake the evaluation of learning tools and materials:

Good luck!

**INSTRUCTIONS FOR PHASE II OF THE PROJECT**

Dear students,
This is a reminder about the second phase of the project. You are requested to follow these steps:
1. Improve their list of materials and tools of the catalogue assigned with new items and/or additional descriptions to the existing ones between April 28th and May 26th.
2. Upload your improved version by May 27th.
3. Fill out the final questionnaire by June 3rd.

Finally, note that it is necessary to undertake all the tasks (including the final questionnaire) in order to complete the project and be awarded with up to 1 point towards your final grade. Please do not hesitate to ask your teachers should you have any queries.
Keep up your work!
APPENDIX 2. THE RUBRIC TEMPLATE AND A SAMPLE OF THE DESCRIPTIVE SUMMARY

<table>
<thead>
<tr>
<th>NAME OF RESOURCE:</th>
<th>Poor</th>
<th>Fair</th>
<th>Good</th>
<th>Excellent</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contents</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Descriptive summary(*)</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Minimal summary of the purpose and features of the material/tool.</td>
<td>Summary of the purpose and features of the material/tool but with important elements missing.</td>
<td>Summary that clearly explains the purpose and features of the material/tool, although missing the odd feature.</td>
<td>Summary that thoroughly explains the purpose and features of the material/tool.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grammar</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Vocabulary</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Little comprehensible information. Limited word choice.</td>
<td>Frequent vocabulary errors but meaning not obscured.</td>
<td>Effective use of vocabulary. It may have occasional errors.</td>
<td>Varied and effective use of vocabulary.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Structure and organisation</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>-----------------------------</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td></td>
</tr>
<tr>
<td>Weak, incoherent.</td>
<td></td>
<td></td>
<td></td>
<td>Combination of simple and complex sentences. Ideas well developed and connected.</td>
<td></td>
</tr>
<tr>
<td>Repetitive pattern in sentences. Some trouble sequencing.</td>
<td></td>
<td></td>
<td>Simple pattern in sentence. Some ideas well developed.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Simple pattern in sentence. Some ideas well developed.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(*) DESCRIPTIVE SUMMARY

Short description → English learning software that provides entertaining immersive environments that help children learn English by participating. Most include pronunciation help and a number provide assistance in the learner's native language. These packages are also dedicated to helping children learn the basics such as the ABCs, numbers and basic phrases and do not focus on extended speech.

User profile and level → Very young learners, levels A1-A2.

Strongest points → Pronunciation practice of discrete sounds.

Limitations for use on a Tourism course → Typical infantile contents and scenarios. General language.

Rating (out of *****) → ***
APPENDIX 3. A SAMPLE OF STUDENTS’ OPINIONS (POSTED ON THE FORUM AND VIA E-MAIL)

- Thank you very much for this opportunity
- Many thanks for this type of initiatives...and for your help.
- I am very satisfied to have taken part in this innovative project. I have learnt many things about how I learn English and will change some things I do now.
- Thanks, I learn a lot about how I learn and about how I should learn! I wish I had done this before.
- Thank you, I have become a lot more reflexive about the learning of my Professional English and that will help me in the future when I want to work online with web programs.
- I liked learning with others – it takes longer but it makes you think a lot more.
- This project was a very good idea. Now you could tell us the process to obtain the credit, and how we know if we have the extra point in the final mark.
- I have enjoyed this project a lot. I wanted to work harder and learned more from it, but I could not spend more time in the project because the dates were very near to the exams.
- I wanted to spend more time working in this project but I didn’t have enough time.
- In general, the work has been very positive, but aLF platform should improve a lot; it was very difficult for me to find all the information, my classmates’ posts, the teachers’ messages, etc.
- Even if the virtual platform has had problems sometimes, the teaching team has been very supportive all the time. When you study in distance education it is very important to know that the persons on the other side can deal with all your queries.
- At the beginning I have felt a bit lost surfing through the virtual classroom but I have got at any time the support of the educational team.
- It has been a shame that could not have exchanged opinions and information with other group of competence in spite of having tried it. But it has encouraged me to see that other (Lexical Competence) was creating good ideas. Looking their work I tried to improve my competence (good idea in the project to have direct entry to other competences).
- This Project has been very useful to help us to search tools that help us improve our level of English, but it has also been hard to identify our English for tourism divided into competences, especially as regards grammar.
- The fact that only 5 persons perform a work that was supposed for groups of 8 has forced us to devote excessive time to a project that was actually not so difficult.
- It was difficult to meet classmates in the chat at a specific time.
How to cite this article:

Author’s contact: ntalavan@flog.uned.es