

Activities involved in the production of a document by more than one author, then pre-draft discussions and arguments as well as post-draft analyses and debates are collaborative components.

In this way, the collaborative process of creating materials includes the writing activity as well as group dynamics.

The interdependency and mutual respect between the different components of collaborative writing is essential for obtaining a coherent proposal. In language learning, students and teachers should become a compact group that discusses and negotiates in a dynamic class (González Fernández, 2006). As Roschelle and Teasley (1995: 70) draw attention to, collaboration is understood as «the mutual engagement of participants in a coordinated effort to solve the problem together».

As Spring (1997) states, the communication requirements of collaborative writing are four-fold: goal setting (determining the purpose or the relevance of the tasks), task division (assigning tasks and communicating the associated requirements and deadlines), brainstorming (generating and recording ideas to be used in production of the text), and general discussion (including formal team meetings as well as casual, impromptu conversations). In this research, all these requirements are taken into account to design material collaboratively.

The third aspect I would like to highlight is the importance of CLIL in teaching a second language. Following Marsh (1994: 2), «CLIL refers to situations where subjects, or parts of subjects, are taught through a foreign language with two aims, namely the learning of content, and the simultaneous learning of a foreign language». This approach involves learning content subjects through an additional language.

In English language teaching, forms of CLIL have previously been known as content-based instruction, English across the curriculum and bilingual education, although this new approach combines all these forms.

Content teachers and language teachers integrate their learning approaches in order to obtain a higher learning outcome from students. CLIL should be taught as a single subject, as it is based on the close cooperation of content teachers and language teachers (Marsh, 2009; Coyle, 2007 & 2009; Hodgson & Jones, 2009; Morton, 2009; Ezeiza, 2009; Carrió, 2009b; Coyle, Hood, & Marsh, 2010).

In this paper, technology implementation, collaborative writing and CLIL are the main aspects taken into account when setting the objectives. The first objective is to define the steps that should be followed to design materials following a collaborative approach. The second objective of this study is to analyse students' role in the process of designing materials. The final objective of this research is to explore how designing materials using the internet and combining collaborative writing and CLIL can improve the dynamics of second-language teaching.

2. Methodology

Ten written units were designed in this research. The CLIL approach and collaborative writing stimulated students to learn content subjects and English as a second language through the use of a versatile tool, the internet. All the tasks were designed on specific-content websites and the activities were available online to students through a private web-based platform on the university website (Poliforma-T).

The writing material included in this paper was designed and used by Spanish and foreign students who were at the university because

they had received an Erasmus grant. They were enrolled on an engineering degree at the Universitat Politècnica de València for the 2011–2012 academic year. They helped select websites and design the material, while supervised by language teachers.

Materials were designed by taking account of collaborative writing, based on Spring (1997), and included: firstly, establishing a goal of the collaboration effort (the purpose and relevance of the task); secondly, identifying writing tasks and dividing those tasks among group members (indicating the requirements and deadlines and the roles for group members); thirdly, tracking individual and collective idea generation (brainstorming); and finally, discussing each unit proposed (defining rules for document management, communicating ideas, managing conflict, simulation strategy, etc). These steps were followed to prepare the material proposed by students and teachers, who worked collaboratively. Each unit included an introduction, objectives, writing activities and a follow-up task.

Furthermore, the students involved in the project answered a questionnaire to rate their motivation in being involved in this project and to assess the benefits for future collaboration activities. The questionnaire was designed to consider the implications of this collaboration with teachers. Finally, students' language proficiency was also assessed to ascertain the implications of this research for the dynamics of second-language teaching.

3. Results and Discussion

The units designed for this project were composed of different sections. All the examples shown in this section are taken from a unit focused on the cabin configuration of Air Force

One. The first section was an introduction to the topic and explained the parts of the website selected for the activity. An example can be seen in (1):

(1) INTRODUCTION

Howstuffworks.com is a very large website that focuses on different topics, mainly describing technical objects or explaining different processes. It covers basically all the basic concepts and definitions, so it is widely visited by students or people who want to acquire a basic idea of a subject. It has got very illustrative photographs of systems and processes, so we consider it very useful to practice English in a technical environment.

This part of the website explains the inner parts of the plane used by the USA president, and it is quite interesting and surprising to learn the basic concepts of Air Force One.

As can be seen, this section was the result of the first act of collaborative writing: establishing the purposes and goals of the task. The second section was also based on this first act. It included the objectives (goals) of the activities. An example can be observed in (2):

(2) OBJECTIVES

The principal objectives of this unit are:

- *To familiarise students with the specific vocabulary of cabin configuration*
- *To discover the mythic qualities of Air Force One and*
- *To learn how to understand different kinds of texts: historical, technical and descriptive.*

This activity can be used to learn the different parts of a cabin or just to revise the technical vocabulary involved in a plane.

The objectives informed students about the goals of the activities and defined the specific

vocabulary to be learnt. The following section was the result of the combination of the second, third and fourth acts of collaborative writing. It also included the tasks based on CLIL and technology implementation. Students designed these tasks by using information found on the internet. An extract of some of the suggested activities can be seen in (3):

(3) ONLINE ACTIVITIES

Go to 'What is Air Force One' at <http://science.howstuffworks.com/airplane.htm>

1.1. Read the first part of the information about Air Force One. Write ten key words of this section. Now, use these key words to ask questions for these answers:

- a. The president of the United States.
- b. Between 630 and 700 miles per hour.
- c. They have three levels.

1.2. Now, after a general description, let's go to focus on the inside part of the plane. Go to the section «Inside». Scan this section and divide the substantives you find in the ones that refer to people and the ones that refer to objects.

Which group of words is more specific? Why?

What are the most outstanding characteristics of the inside parts of the plane?

1.3. Click on the image which is in the section «Floor Plan» to see a complete floor plan of Air Force One. It will open in a separate window so you can toggle between the article and the floor plan. Describe the different parts of the plane including all the specific vocabulary that is included in the picture. Send a message to your partner and discuss this topic.

1.4. Place these people or objects inside the plane:

- a. Food:
- b. Bulk of passengers:

c. The president getting off Air Force One:

1.5. Go to next section «Special features». Complete the sentences after reading this section (do not copy the answers from the text):

- a. The plane has quite a lot of special characteristics because
- b. The stairways
- c. The electronics included in the plane are

1.6. Go now to section «History». What do you know about the history of USA? Write two historical events you remember. Do you think the history of USA affects us or do you think they are too far away to influence our economy or political situation? Give reasons to support your answer.

Write the name of the presidents mentioned in this section and look for more information about them in the Internet. Contrast your answer with your partner's.

As shown in the different parts of (3), the activities were based on the website chosen for the activity and instructed students to scan and skim information on the internet. The last section included in the unit was a follow up. Students suggested this part in the fourth act of material design: the discussion. They thought this part could be important to help students learn more vocabulary and improve their specific knowledge. An example can be seen in (4):

(4) FOLLOW UP

The following links will provide more information about the inside parts of a plane:

- www.therealcockpit.com
- www.fokkerservices.com/page.html?id=5353

The activities were updated regularly at the beginning and the end of each semester to

adapt the exercises to students' needs. At the end of the academic year, language teachers and students worked together to include web-site updates and students' suggestions. All suggestions and comments were discussed in a brainstorming activity and the changes to be made to the web-based activities were agreed by teachers and students.

Additionally, students were given a questionnaire to rate their approval of the suggested activities. The findings revealed that students' satisfaction increased by 20% compared with the results obtained in the same language subject in the previous course. The keys to this success were the fact that students thought the topics covered were relevant for their degree and the activities were dynamic and implied collaborative work with teachers.

Finally, it was observed that students considered language to be a practical tool for communicating with professionals all around the world and as part of their everyday activities, learning not only how to communicate but also how to improve language proficiency in an autonomous manner. In order to motivate students, materials should be adapted to their profile and interests; students should feel that they are improving their second-language learning skills and are able to communicate using the style and rhetoric of a foreign culture. In addition, the foreign students involved in this research were particularly interested in using authentic material that reflected the cultural and linguistic aspects of the Anglo-Saxon world.

4. Conclusions

In this study, students and teachers worked together to design writing activities that included CLIL and the use of authentic materials by using websites. In the motivation question-

naire, students said that learning through authentic materials stimulated language learning and content learning.

Four steps were followed in this research to design material using a blended approach and technology implementation: firstly, a goal was established, as can be seen in Examples (1) and (2); secondly, writing tasks were identified and assigned to members; thirdly, ideas were generated; and finally, each suggested unit was discussed, as can be seen in Examples (3) and (4). The result of these steps was the production of CLIL activities, with teachers working collaboratively with students.

Furthermore, students cooperated with teachers in the process of designing materials, and this pilot study revealed some very positive aspects: self-esteem was reinforced, scanning and skimming information was done efficiently and students used English as a vehicular language. Students felt more confident using a second language after designing and using online activities, since they had to focus not only on language learning but also on language purposes and benefits. The findings of the questionnaire on students' motivation were very positive and students said they preferred to be involved in material design whenever possible and they consider themselves responsible for the success of training in a second language. The dynamics of second-language teaching classes was more interactive and students participated and discussed the questions and answers for the activities proposed.

Nevertheless, negative aspects as the volatility of web-based materials should also be considered. In addition, the collaborative design of activities is not an easy task, as the interests of language teachers and students rarely coincide. The suggested material was the result

of several meetings and brainstorming activities and finally an agreement was reached with all the members of the team.

Summing up, the benefits of designing these specific website-based units are: language teachers and students work together to

design material; the blended approach stimulates interpersonal communication through group activities; students are aware of the process of developing materials; and finally, the use of technology offers the same opportunities to all students, whatever their circumstances.

References

- CARRIÓ, M.L. (ed.) (2006). *Aprendizaje colaborativo asistido por ordenador*. Valencia: Blau Verd.
- (2009a). «Enhancing learner-teacher collaboration through the use of on-line activities». In: GONZÁLEZ-PUEYO, I.; FOZ-GIL, C.; JAIME, M.; LUZÓN, M.J. (eds.). *Teaching Academic and Professional English Online*. Berlin: Peter Lang.
- (2009b). «Cultural diversity in CLIL». In: CARRIÓ, M.L. (ed.). *Content and Language Integrated Learning: Cultural Diversity*. Berlin: Peter Lang.
- COYLE, D. (2007). «The CLIL quality challenge». In: MARSH, D.; WOLF, D. (eds.). *Diverse Contexts - Converging Goals*. Berlin: Peter Lang.
- (2009). «Promoting cultural diversity through intercultural understanding: a case study of CLIL teacher professional development at in-service and pre-service levels». In: CARRIÓ, M.L. (ed.). *Content and Language Integrated Learning: Cultural Diversity*. Berlin: Peter Lang.
- COYLE, D.; HOOD, P.; MARSH, D. (2010). *CLIL*. Cambridge: Cambridge University Press.
- EZEIZA RAMOS, J. (2009). «Integrating languages, contents and cultures in the European Space for Higher Education: from theory to practice». In: CARRIÓ, M.L. (ed.). *Content and Language Integrated Learning: Cultural Diversity*. Berlin: Peter Lang.
- GONZÁLEZ FERNÁNDEZ, R. (2006). *Las estrategias y técnicas didácticas en el rediseño*. Retrieved from <http://sitios.itesm.mx/va/dide2/tecnicas_didacticas/ac/Colaborativo.pdf> (15 January 2010).
- HODGSON, I.; JONES, S.R. (2009). «Working across boundaries with CLIL». In: CARRIÓ, M.L. (ed.). *Content and Language Integrated Learning: Cultural Diversity*. Berlin: Peter Lang.
- IMUS, A.; PLOYHART, R.; RITZER, D.; SLEIGH, M. (2004). «An understanding of students' perceptions of technology use in the classroom». *Inventio: Creative Thinking about Learning and Teaching*, vol. 6(1).
- LEA, L.; CLAYTON, M.; DRAUDE, B.; BARLOW, S. (2001). «The impact of technology on teaching and learning». *Educause Quarterly*, vol. 2(1), pp. 69-71.
- LI, J. (2006). «The mediation of technology in ESL writing and its implications for writing assessment». *Assessing Writing*, núm. 11, pp. 5-21.
- LUKE, C. (2006). «CALL in the broader context». In: DUCATEM, L.; ARNOLD, N. *Calling on CALL: From Theory and Research to New Directions in Foreign Language Teaching* (pp. 21-41). San Marcos, Texas: CALICO.
- LUZÓN, M.J. (2009). «Learning academic and professional English online: Integrating technology, language learning and disciplinary knowledge». In: GONZÁLEZ-PUEYO, I.; FOZ-GIL, C.; JAIME, M.; LUZÓN, M.J. (eds.). *Teaching Academic and Professional English Online*. Berlin: Peter Lang.
- MARSH, D. (1994). *CLIL the European dimension*. Brussels: European Council.
- (2009). «Introduction: culture, education & content and language integrated learning». In: CARRIÓ, M.L. (ed.). *Content and Language Integrated Learning: Cultural Diversity*. Berlin: Peter Lang.

- MORTON, T. (2009). «Integrating language and content in secondary CLIL History: the potential of a genre-based approach». In: CARRIÓ, M.L. (ed.). *Content and Language Integrated Learning: Cultural Diversity*. Berlin: Peter Lang.
- ROSHELLE, J.; TEASLEY, S.D. (1995). «Construction of shared knowledge in collaborative problem-solving». In: O'MALLEY, C. (ed.). *Computer Supported Collaborative Learning* (pp. 69-97). Berlin: Springer-Verlag.
- SCHRODT, P.; TURMAN, P. (2005). «The impact of instructional technology use, course design, and sex differences on students' initial perceptions of instructor credibility». *Communication Quarterly*, vol. 53(2), pp. 177-196.
- SPODARK, E. (2005). «Technoconstructivism for the undergraduate foreign language classroom». *Foreign Language Annals*, vol. 38(3), pp. 428-435.
- SPRING, M. (1997). *Collaborative writing*. Retrieved from <www.sis.pitt.edu/~spring/cas/node31.html> (19 September 2011).
- TAYLOR, R.; GITSAKI, C. (2004). «Teaching WELL and loving IT». In: Fotos, S.; Browne, C.M. *New perspectives on CALL for second language classrooms* (pp. 131-148). New Jersey: Lawrence Erlbaum.