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## WHAT DO MAJOR STAKEHOLDERS REALLY THINK? BUSINESS ENGLISH STUDENTS' PERCEPTIONS ABOUT PROBLEM-BASED LEARNING

### Abstract

The present study emerged from the need to give more visibility to business disciplines in connection with problem-based learning (PBL) and to give voice to students, who may be regarded as the major stakeholders in a PBL project. This article examines students' perceptions and attitudes towards the implementation of a PBL project in the subject of Business English. We analyze the results obtained from a student questionnaire that was administered at the end of a 9-week experiment. Overall, feedback was positive as most students rated this methodology as good or very good and envisaged the possibility of applying it to theoretical subjects of their own degree. Some of the frustrations expressed by students were uncooperative team members, the lack of direction associated with insecurity about the performance of activities, boredom caused by the lack of variety in writings, and the difficulty to find the right solutions. We believe that future PBL programs should take into account students' criticism and suggestions for improvement. Therefore, teachers should consider allotting sufficient time for the performance of activities, including a larger pool of writing activities, more personalized feedback on students' writings and using a more appealing wording of problems.

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### Key words

Business English, problem-based learning, questionnaire, pitch, business memo.

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## 1. INTRODUCTION

The new millennium is characterized by a growing accessibility to knowledge, an information explosion brought about by unprecedented discoveries in science and technology, new industrial and business challenges, as well as changing political and social landscapes. The twenty-first century society is set against the backdrop of the knowledge-based economy in which the use of ideas and the application of technology have gained ground over physical abilities and the transformation of raw materials respectively. The knowledge-based economy is rapidly altering the demands of the labor market all over the world. For instance, in industrial countries, the introduction of new technologies has caused an increase in the demand for workers skilled in information and communication technology (ICT). Preparing competent workers in the knowledge economy implies implementing a new model of education and training which should aim at developing learners' decision-making, problem-solving skills, the ability to learn on their own (self-learning) and with others (peer learning), the ability to upgrade their skills on a continuing basis (lifelong learning), as well as the ability to transfer learning across contexts and disciplines (lifewide learning) (cf. Tan, 2003).

Traditional notions of rote learning and exam-driven schooling are no longer sustainable in the knowledge economy. We believe teachers should go beyond the role of content disseminators as nowadays, on the one hand, information access and retrieval are at the click of the mouse and, on the other hand, content knowledge turns obsolete or irrelevant very quickly (cf. Brennan, Fedrowitz, Huber, & Shah, 1999). The Internet era entails a change in paradigm, a revamp in the curriculum content, mode of delivery and assessment criteria. This clearly calls for a problem-based approach to the curriculum, where learners could act as active problem solvers and teachers as designers of learning and mediating coaches. Problem-based learning (PBL henceforth) can be defined as a teaching method in which students work in small teams to explore a problem scenario and through this exploration they become aware of the limitations in their knowledge and skills, and of the information they need to acquire in order to be able to solve the problem presented to them (cf. Barrows & Tamblyn, 1980). According to Margetson (1994), a PBL curriculum is beneficial for learners in that it fosters the development of lifelong learning skills in the shape of reflective, open-minded, critical and active learning. What is more, PBL curricula could endow learners with much needed assets in the labor market: problem-solving, communication, teamwork and interpersonal skills. The use of PBL in education is crucial since the 21<sup>st</sup> century is defined by enhanced connectivity. As real-world problems are cross-disciplinary and involve multiple perspectives, workers need to have a bird's-eye view of things, use a wide range of cognitive processes, synthesize and make unexpected connections between different fields of knowledge. That is why immersion in a problem scenario can help learners develop a whole gamut of cognitive functions such as configuring (systems and holistic thinking), recognizing

and making patterns, observing and making use of observations, analogizing, imaging, generating new arguments and explanations, abstracting, empathizing, transforming information, etc.

The benefits of PBL in education have also been confirmed by a wide array of empirical studies. Thus, it has been shown that small group discussion in PBL has five main cognitive effects: (1) better recall of information (De Grave, Schmidt, & Boshuizen, 2001), (2) activation of prior knowledge (Norman & Schmidt, 1992), (3) theory building or causal reasoning which takes place both verbally and in students' thinking (De Grave, Boshuizen, & Schmidt, 1996), (4) the emergence of cognitive conflicts leading to conceptual change and knowledge acquisition (De Grave, Boshuizen, & Schmidt, 1996), and (5) collaborative knowledge construction (Visschers-Pleijers, Dolmans, Wolfhagen, & van der Vleuten, 2004). As far as the motivational effects of PBL are concerned, it was found that group interaction has a positive influence on students' productivity and intrinsic interest in the subject matter (cf. Das, Swadi, & Mpofu, 2003; Dolmans, Wolfhagen, & van der Vleuten, 1998).<sup>1</sup>

As can be seen from the above cited references and to the best of our knowledge, most empirical research in PBL has been carried out in the field of medicine. Therefore, more work should be done in less explored areas such as business subjects. What is more, in her book, Savin-Baden (2000: 9) stresses that despite the growing popularity of this teaching methodology "there is [...] little known about what actually occurs [...] inside problem-based curricula in terms of staff's and students' 'lived experience' of the curriculum". Since "students' [...] voices are largely missing from the literature on problem-based learning" (Savin-Baden, 2000: 9), the present study aims to give voice to students, who may be regarded as the major stakeholders in a PBL project. Also, as business disciplines need to be given more visibility in connection with PBL, the main goal of this article is to examine students' perceptions and attitudes towards the implementation of PBL in the subject of Business English.

## 2. THEORETICAL FRAMEWORK

Reporting on students' experience, Macdonald (2004) uses participatory action research to examine the benefits and pitfalls of PBL on a business and management course in The Netherlands over a period of four years. Previous studies have also focused on learner experience in the context of PBL. For instance, Ryan (1993) was concerned with knowing whether students found it important to act as self-directed learners. Authors such as Dolmans and Schmidt (1994) discussed how different elements of PBL curricula affected students' self-study patterns. Based on

<sup>1</sup> For more information on the cognitive and motivational effects of PBL see Dolmans and Schmidt (2006).

the findings of a PBL course in social work, Taylor and Burgess (1995) showed that students requested an introductory program to problem-based learning that could include four areas, namely the expectations of the lecturers regarding self-directed learning, the role of the facilitator, problems of time management, and the principles and practices of group learning. Building on these studies, Macdonald (2004) goes a step further in that he addresses all the issues mentioned by students in their questionnaires and interviews in order to (1) provide tutors with immediate feedback on their practices, (2) help them become reflective about their practice, and ultimately (3) better the students' learning experience through changes in tutors' practices. With respect to the benefits of PBL, some students claimed that it enabled them to develop understanding more than rote learning and to see how the theory can be applied in the real world. Other students valued the greater responsibility they were given for their own learning and the sense of freedom and creativity as compared to more traditional approaches. As Biggs (2003) pointed out, PBL is motivating as it encourages a deep approach to learning in which students feel they learn meaningful information. In connection to deep approaches to learning, Ramsden (2003: 57) also claims that students adopting this kind of approach show greater fulfilment through their studies, write better assignments and obtain higher grades. Nevertheless, all was not perfect in Macdonald's (2004) study as he explains that students from other countries felt frustrated for not being taught theory. Others believed there was a misalignment between the use of the PBL as the curriculum model and the methods for assessment which relied heavily on the book and required a narrow recall of knowledge.

Drawing from case vignettes of postgraduate, university and polytechnic students, Tan (2003) examines their experiences with PBL in terms of their attitude towards problems, collaborative learning, problem solving, self-directed learning and the coaching process. Regarding the first variable, some claimed that PBL did not align with their learning style and favored a more traditional approach in which the teacher systematically spoon-feeds students with information. Apart from the need for closer guidance, other sources of discontent were their own lack of foundation knowledge which hindered their progress and caused them to lose interest in the subject. Others appreciated being exposed to real-world problems which stirred their curiosity and enhanced their knowledge retention.

As far as collaborative learning is concerned, Tan (2003) states that it is usually more mature students, namely postgraduate students, who display a positive attitude towards group work. This is accounted for by the fact that PBL fits well with the principles of adult learning according to which students take responsibility for their own learning, autonomously set their learning goals and share with their peers (cf. Knowles, 1980 as cited in Tan, 2003). Two main problems seem to arise when adopting a collaborative approach: the opinion of the majority, which may not always be the most appropriate, and the existence of 'free riders' or uncooperative group members.

When it comes to the variable of problem solving, most students are appreciative in that problems offer them the chance to gain different viewpoints, apply different ways of thinking as well as use reflection and metacognition. Others require more mediation on the part of the tutor as they feel uncertain of the direction in which they are heading or uncertain whether they have identified the problem correctly or not. With respect to self-directed learning, many students enumerate some of the benefits of this methodology such as learning to use the Internet and to seek information, which are seen as lifelong learning assets. Among the common frustrations expressed by autonomous learners, we can mention the absence of guidelines when looking for information (cf. Tan, 2003). Thus, this author suggests that teachers could provide younger learners with a resource guide or with the basic technical definitions and concepts at the start of PBL sessions. There are certain problem scenarios building on and activating prior knowledge (e.g. basic principles of physics, mathematical tools or axioms, language skills), which require teachers to investigate whether their students have enough knowledge and experience to solve those problems. The negative comments regarding tutors' coaching skills point to the fact that lecturers need not only to be equipped with process skills (e.g. questioning, facilitating metacognition, dealing with group dynamics) but also to be able to identify and evaluate these skills.

Lau and Talbot (2000) used Savin-Baden's (2000) framework of learner stances (personal, pedagogical and interactional) to analyze Chinese students' beliefs about a work-based PBL project. Contrary to Savin-Baden, none of the students in Lau and Talbot's study reported 'fragmentation' in their personal stances, i.e. the students' values and beliefs were not threatened at any time by the challenging nature and uncertainty resulting from a PBL methodology. What is more, students claimed that they were able to discover themselves, their own strengths and weaknesses, as well as mature in their attitudes, behavior and outlook of life and perception of self. Besides defining their future selves and placing themselves in relation to their life world, students also understood the relevance of the skills learned and the need for transferring them in their future careers. In contrast to Savin-Baden's research, none of Lau and Talbot's students used 'strategic pedagogy' as for many of them the value of the learning process was more important than the outcome of meeting the supervisor's expectations or passing the course. Moreover, students experienced a higher degree of pedagogical autonomy as they could choose the host organization they wanted to work with and the kind of project to carry out for them. Given that Lau and Talbot's project was group-based and involved interaction with different parties, almost nobody adopted the 'ethic of individualism' in their interactional stance. Finally, most students pointed out that the interaction with other group members and the host organization enabled them to connect and make sense of their learning and reality.

### 3. METHODOLOGY

A quantitative method approach was adopted for our study. We used an experimental design without a control group with two goals in mind: (1) to find out students' perceptions and attitudes towards the implementation of a PBL project in the subject of Business English, and (2) to see if this kind of methodology can have a significant impact on students' English level. In order to reach the first goal, we administered a postintervention questionnaire which was completed in class at the end of the 9-week experiment. As for the second goal, a Macmillan Upper Intermediate/Advanced Placement test was administered at the beginning and at the end of the experiment. A Student's t-test was conducted so as to check whether there were any significant differences between the initial and the final proficiency testing. The content of both the questionnaire and written test will be discussed in the 'Data gathering and analysis' subsection.

#### 3.1. Participants

The study was carried out in the Degree of International Business at the University of Valencia, in the first semester of the academic year 2017-2018. The participants for this study were 71 first-year Spanish students enrolled in the subject of Business English. Out of the 71 participants, 51 were female and 20 male, with ages comprised between 18 and 25.

When students were asked if they had previous exposure to PBL, 90% claimed not having participated in a PBL experiment before this course. Although 9.86% affirmed to have had prior exposure to this kind of methodology, none of them gave examples of such experiments.

#### 3.2. Instructional setting

The course of Business English was divided into lectures or theoretical lessons, and practical classes. Each type of class was taught on different days of the week. For the theoretical lessons the teacher had to work with the whole group of 71 students while in the practical classes students would split into three smaller groups of 20 to 30 students each.

The week started with a 2-hour theoretical session during which the use of a textbook was combined with experimental work. In the first half of the class, the teacher followed a textbook to focus on different grammar or vocabulary aspects. The second half of the theoretical session was devoted to the PBL experiment. The week finished with another 2-hour practical session during which students would

continue working on the PBL project. Overall, three hours were dedicated to the PBL project every week.

In the second half of the theoretical session and the practical session students worked in groups of four on a total of nine case studies under the guidance of the teacher. To arouse students' interest, most problems were based on real life scenarios or were adapted from the textbook. For example, the first activity involved watching a video about a failing business from the American reality show *Restaurant: Impossible*, i.e. Woody's Tupelo Steakhouse. Students had to identify the problems faced by this restaurant and offer viable solutions to save the business. For the second problem students had to think of strategies to mitigate Nokia's supply chain disruption that occurred in 2000. For the third activity students were asked to discuss and handle the crisis suffered by the pharmaceutical company Johnson & Johnson in 1982 when several consumers died after taking Tylenol capsules. The fourth activity involved negotiating strategies to solve the problems faced by the low-cost airline JetBlue in 2007. The fifth activity required students to deal with the complaints expressed by dissatisfied customers with respect to Hermes Communications, a fictional telecommunications company. For the sixth activity students had to conduct research on the CSR (Corporate Social Responsibility) program of a company of their own choice and advertise it as the best brand in front of the other classmates, who acted as members of the Coolest Brands Council, a British committee created in 2001. The seventh activity involved on the one hand, analyzing the factors that contributed to the failure of Ryan Grepper's Kickstarter campaign in 2013, and on the other hand, revamping the campaign to obtain funding. For the eighth activity students had to do research on ethical mobile applications, choose the most useful one and prepare a pitch to convince investors to support either the creation or the sale of such an application. The last activity required students to give an individual oral presentation about how they would solve the problems experienced by an NGO of their choice, either local or international. Not only was the content of the activities different but also their purpose. While the purpose of activities 2, 3, 4, and 5 was the creation of a business memorandum, the goal of activities 6, 7, 8, and 9 was to teach students to write and ultimately, deliver a business pitch. As the main objective of the first activity was to gradually introduce students to the PBL methodology, they were not asked to create any final product, but to take notes of the problems presented in the video and of their own solutions.

For this study, students followed Schmidt and Moust's (2000) problem-solving framework, the so-called "Seven-Jump method" according to which problem discussion is performed in two tutorial group meetings that are held every week. In the first meeting, which took place in the second half of the theoretical session, students carried out the first six steps: (Step 1) clarification of unknown concepts, (Step 2) identification of the problem, (Step 3) brainstorming on the problem, (Step 4) problem analysis using prior knowledge and common sense, and (Step 5) formulation of learning objectives. Regarding Step 6, i.e. the

selection and study of relevant literature resources, we decided to provide the students with a list of newspaper articles for each problem in order to guide them in the right direction. Our decision was motivated by Wijnia, Loyens, and Derous' (2011) findings about self-directed study in PBL. They found that first- and second-year students sometimes feel insecure about their search for relevant learning materials and appreciate more controlling or directive tutors who give them tips about core literature resources. Apart from reading newspaper articles and taking notes in the theoretical class, students were also encouraged to continue documenting themselves at home. In the second meeting, which took place in the 2-hour practical session, students shared their findings and proposed solutions to their team members (Step 7). At the end of this meeting, each group had to submit a writing assignment, either in the form of a business memorandum or a business pitch. In this way, the teacher made sure each group understood and completed the task successfully. In Box 1 we illustrate two real world problems of the kind that were used in the experiment.

**Problem 3: Tylenol crisis**

We are in October, 1982. You are James Burke, the Chief Executive Officer (CEO) of Johnson & Johnson, an American multinational manufacturer of medical devices and pharmaceutical products. This morning you received a shocking phone call from a news reporter asking you to comment on the recent incidents in Chicago – seven people were reported dead after taking Tylenol capsules. Your product Tylenol is the leading painkiller in the United States and accounts for a 37% market share with revenue of about \$1.2 million. The FBI is now conducting an investigation to get to the bottom of this situation. You hold a meeting to inform your team about this serious problem and to think of quick strategies to handle the crisis before it blows out of proportion.

**Problem 7: Kickstarter campaign**

You are Ryan Grepper, an American inventor, product developer and entrepreneur. You designed the Coolest, a multi-function cooler which includes an ice-crushing blender, a Bluetooth music player, LED lamps, a bottle opener with magnetic cap catch. You decided to launch a Kickstarter campaign (a crowdfunding global platform) for the Coolest in November 2013 but fell short of the \$125,000 goal and failed to secure any funding (you ended up raising only \$100,000 which is 81.75% of the amount). Under Kickstarter's 'all-or-nothing' funding rules, you will not receive a penny from pledges since you failed to meet the goal. Nevertheless, you are determined to turn things around and you think you just need to tune your pitch up a little bit more to be able to relaunch a successful campaign. Together with your team, watch the campaign video again and analyze the factors that might have contributed to the failure. Second, discuss how you would revamp either your product or the entire campaign to obtain funding.

**Box 1.** Examples of problems

As made evident by this box students were given role cards with different background information about the same problem. These cards also contained detailed explanations about the roles and responsibilities of each team member as well as useful functional language they could use in their group meetings (e.g. language for negotiations, language for conflict resolution, language for expressing reservations and doubts, etc.). As explained in the introduction, students had to act

out as different organization members, e.g. Chief Executive Officer (CEO), Human Resources Manager (HRM), among others. The purpose of the initial meeting was to identify all the variables of the problem by exchanging the information given on the cards. Each group would have a chairperson opening and closing the meeting and a secretary taking notes of the decisions reached. For each of the two problems exemplified in Box 1 the purpose of the second meeting was different. Thus, for Problem 3 students had to write a business memo detailing all the problems and their corresponding solutions. For Problem 7 they had to write a business pitch in order to persuade angel investors to support the Coolest Cooler campaign and thus, meet the funding goal.

As for the teacher, their role was different depending on the session. In the theoretical class, they would introduce the case studies, explain the different concepts by going through the definitions of the new terms or watching explanatory videos, and assist students in their reading and note taking. Students were also provided with glossaries of words that they had to study for the mid-term exams. Moreover, the teacher spent some time explaining the structure of a business memorandum or of a pitch. Samples of successful writings from previous years were uploaded on the Virtual Classroom for students to consult at any time. In the practical session, the teacher would constantly monitor the progress of the meetings by ensuring that students stay on the topic, speak in English and by correcting any errors in their memos and pitches. At the end of the practical session, there would be a whole class discussion in which spokespeople would inform about their group decisions. On some occasions, the teacher would play a video showing how the crisis was handled in real life. We believe that the closure process is very important in the PBL experience. In our case, we used some of Berkson's (1993) suggestions for closure, i.e. a synthesis of the work done and a comparison between the solutions proposed by students with the ones adopted by the real corporations.

### 3.3. Data gathering and analysis

Data were gathered by means of a postintervention questionnaire and two proficiency tests which were completed in class by the participants. The questionnaire was administered at the end of the 9-week experiment in order to measure the students' perceptions and attitudes towards the PBL methodology. On the other hand, the Macmillan proficiency test was completed before and after the experiment. This test consisting of 40 grammar and 10 vocabulary questions was used in order to ascertain our students' English level and to check whether the PBL methodology can bring about any improvements in the students' English level. The questionnaire comprised nine questions distributed as follows: five open-ended questions, three questions involving circling categories or ticking yes/no boxes, and one question requiring responses on a five-point Likert scale. We decided in

favor of a mix of both quantitative and qualitative information. While the former can serve as a basis of comparison between different case studies, the latter was used to obtain a more meaningful feedback and a better feel for the real learning experiences of students.

As far as the data analysis is concerned, we conducted a textual analysis of students' responses in the questionnaire in order to categorize all their answers and obtain a bird's eye view of their perceptions and attitudes towards the PBL project. We also carried out a paired t-test in Excel to see if there is a significant difference between students' perception of on the one hand, meetings and pitches, and on the other hand, usefulness and task interest. With the help of a third t-test, we were able to determine whether students' beliefs changed significantly throughout the experiment. Another paired t-test was conducted on the results obtained from the proficiency tests to check the differences in participants' English level before and after the experiment.

#### 4. RESULTS AND DISCUSSION

Before conducting the t-test, we decided to set the level of significance  $\alpha$  at 0.01 in order to increase the confidence limits on the measurement. According to the Kolmogorov-Smirnov test, the marks obtained in the proficiency tests follow a standard normal distribution. A cursory glance at the mean of both marks in Table 2 reveals that the final mark is slightly superior to the initial one. Although this looks promising we need to check whether students' improvement from the initial to the final test is statistically significant. Given that our p-value for the two-tailed test is much less than the alpha figure ( $0,000000001 < 0.01$ ), we can reject the null hypothesis according to which there is no difference between means. In other words, we can state that the PBL experiment had a positive outcome on the final proficiency test, and therefore, on students' English level.

T-TEST	INITIAL MARK	FINAL MARK
Mean	78.0282	82.7324
Variance	121.6563	101.1702
Observations	71	71
Degree of freedom	70	
t Statistic	-7.1744	
P(T<=t) two-tail	0,000000001	
t Critical two-tail	1.9944	

**Table 1.** Differences between students' initial and final proficiency tests

With respect to the questionnaire,<sup>2</sup> the first question sought to discover which of the nine PBL activities figured in students' top preferences in terms of usefulness and interest. Based on the results obtained from Question 1, three t-tests were performed to establish whether there were any differences between several variables: (1) students' perception of the first and final activity, (2) students' perception of meetings and pitches, and (3) students' perception of usefulness and task interest. The first t-test enables us to confirm that students' beliefs about the usefulness of the PBL activities significantly changed as a result of the experimental treatment. Students' change in perception might be explained by the fact that, at the beginning of the experiment, they were aware that something was being taught but the learning was not yet relevant to them. The lack of relevance is also made evident by the words of a student who claimed that they disliked the first activity because "it was the first one and I didn't really get the point of its objective and importance". As the goal of this experiment was to turn our students into active and responsible learners, the last activity involved giving an individual oral presentation about how they would solve the problems faced by NGOs. The accomplishment of this goal is also validated by the fact that this last activity was considered, by far, the most useful one.

The second t-test shows that the activities involving the creation of pitches were significantly more popular than the ones related to business memos, both in terms of usefulness and task interest. Finally, the findings stemming from the third test highlight that there is no significant difference between students' perception of usefulness and task interest. In other words, what students believed to be useful is on a par with what they deemed interesting.

Question 5 gave students the opportunity to talk about the activities they liked and justify their preferences. Thus, 41% of students preferred pitches over meeting memos, a fact that was also confirmed by the results of the second t-test. As for the motivation behind their preference, 42% of students chose pitches because they could use their creativity and enjoyed themselves when getting actively involved. Other reasons for preference of pitches were their usefulness in relation to students' future career, the improvement of their English level, especially their speaking skills, the learning gains derived from these activities (e.g. marketing tools and strategies), their interactive nature and the increase in their self-confidence. The perception of future usefulness relates to Savin-Baden's (2000) discovery that students perceive the relevance of the skills learned in the light of their application in their future jobs.

Question 2 shows whether students see any connection between the use of PBL in other subjects and the increase of motivation. We were pleasantly surprised to see that 81.89% of students felt that PBL would increase students' motivation if implemented in other, more theoretical business subjects such as Introduction to

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<sup>2</sup> The contents of the questionnaire are provided in the Appendix.

economics, Introduction to business management, or even other language courses such as Business German or Business French.

Question 3 allowed students to rate and freely express their views about their PBL experience. Thus, 88.74% of students considered this methodology to be either good or very good. Overall, we received positive feedback concerning the active participation of students (29%), the creative nature of PBL (12%), the development of students' thinking skills (12%), the good organization of the course (12%), and preparation for their future careers (12%). Nevertheless, some comments seem to corroborate Tan's (2003) and Macdonald's (2004) claims according to which certain students favor a more traditional approach to teaching (12%). It is quite obvious that these students are at a stage of dualism as they believe there are right and wrong answers to any question, that knowledge is limited to a syllabus, and it is the teacher's role to impart the "correct" answers and learning objectives.<sup>3</sup> For a student in a state of dualism PBL can be quite frustrating as they discover they cannot rely on the teacher for the correct answers and to top it all off, different students within the group identify different answers. The rationale behind PBL is to stimulate students to grow intellectually and to draw them from the stage of dualism through to a commitment to relativism, into a world where they can become co-creators of knowledge. In line with Wijnia et al.'s (2011) findings, the request for flexibility (12%) illustrates that some students find the PBL learning environment to be too controlling at times. Most likely, the directive aspects mentioned are the mandatory presence to laboratory classes and the procedure to discuss problems.

Question 4 enabled students to express their reasons for discontent regarding the PBL experience. While 21% of the participants claimed not having experienced any problems during the experiment, 79% of them mentioned a variety of problems. Close attention should be paid to the most recurrent problem mentioned by our students, namely the linguistic competence (14%). This can be further divided into students' acknowledgement of their own linguistic limitations (e.g. lack of vocabulary, speaking or listening skills) or the teacher's failure to meet their expectations regarding the improvement of their writing skills. Some of the reasons are in consonance with claims made by Tan (2003) and Dolmans and Schmidt (2006): a haphazard tutorial group meeting, lack of direction, and uncooperative team members refusing to discuss problems or share information. We believe that the disorganization of group meetings might be related to the lack of time which could lead to anxiety (7%) and the sensation of being overwhelmed by a heavy workload (6%). In our case, the lack of direction can be linked to the insecurity about the performance of activities (10%). Although the unwillingness of team members to cooperate is the most common problem under the heading of teamwork, we found that this is not the only side of the story. Some students also referred to the difficulty to reach consensus in a group due to divergence of opinions or the dependence on team members' cognitive

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<sup>3</sup> For an overview of the stages of intellectual development see Perry (1999 as cited in Bate, Hommes, Duvivier, & Taylor, 2014).

skills for the quality of output. In order to mitigate some of these negative effects, Woods (2000 as cited in Tan, 2003) recommends training students to develop group-work skills and teamwork prior to any exposure to PBL. Furthermore, Tan (2003) encourages teachers to use peer assessment or even assessment measures rewards to keep poor team learners under control. Our study also adds reasons such as the difficulty to find the right solutions (10%), boredom caused by the lack of variety in writings (8%), lack of understanding of the instructions (8%), fatigue and absence of new knowledge (4%).

Question 6 asked students to name and give reasons for the activities they disliked. More than half of the students (56%) affirmed to dislike meetings. Looking at the causes of dislike might give us helpful hints as to what needs to be avoided in a PBL experiment. In this way, the three most common causes of dislike were related to feelings of boredom, the text features of a problem, and the lack of understanding (23%). It can be argued that students' boredom might bear a connection with the excessive number of meetings (18%). The heading of text features covers several aspects, e.g. the length of a problem, the use of repetitive language, the absence of context, lack of coherence or a theoretical nature. To some extent, the text features of a problem can be said to hinder its comprehension. Thus, what needs to be left out of a PBL experiment is: (1) using problems that are too demanding cognitively and that lack proper background information, (2) formulating excessively long descriptions of problems, (3) cramming too many problems in a single case study, which can generate confusion, and (4) imposing too many guidelines for the development of meetings (5%). As a future recommendation, it is necessary for the teacher to formulate problems in a student-friendly language by breaking down concepts and by asking questions leading to understanding. We also believe that students can be predisposed to dislike a given problem when they are told that that problem does not reflect a real-life situation (3%).

Questions 7 and 8 showed to what extent students felt they had learned something meaningful throughout the experiment. Thus, 92% of students stated that they had learned something and had been encouraged to develop their opinions. The overwhelmingly positive results point out that PBL not only encourages a deep approach to learning but also increases students' intrinsic motivation for a subject. What most students appreciated about this methodology is that it helped them develop their linguistic competence (59%). The term linguistic competence encompasses here the acquisition of business terminology and grammar as well as the development of writing and speaking skills. It does not come as a surprise to see that students valued greatly the development of public speaking skills as oral presentations were voted as the most useful activity. They were also grateful for the improvement of their problem-solving skills (14%), teamwork skills (13%) and critical thinking skills (4%). Other minor learning gains that students mentioned were the capacity to innovate (3%), the increase in self-confidence derived from the development of their public speaking skills (3%), the acquisition of business strategies (3%), and the ability to transfer knowledge

across disciplines (1%). Last, group activities, in general, were considered to foster the development of personal opinions (61%).

Question 9 addressed the central notion of how the experiment might be improved as we believe that all students' suggestions should be taken into account if this experiment were to be carried out in future years. Thus, most students' comments revolved around the opposition between theory and practice in that students asked for the scale to be tilted in favor of the practical lessons instead of the use of the textbook or the inclusion of PBL activities in theoretical classes to make them more didactic and more dynamic (27%). The second largest variable gathers all those comments that were mentioned only once such as the decrease of workload, a better distribution of the activities within class planning, a more appealing wording of problems, the improvement of the acoustics of the classroom, the inclusion of movies/ICT tools or activities of a more advanced level, among others (18%). Other variables that deserve special attention would be additional time for activity performance (11%), the implementation of a larger variety of writing activities (10%), and the correction of writings (10%). A small caveat is in order here. As previously explained in the 'Instructional setting' section, the teacher did give feedback on the writings by correcting errors in class time or by offering a synthesis of the problems and solutions. However, working with such a large group of students did not give us the possibility to provide a more personalized feedback. In a similar vein, students themselves understood the importance of conducting a PBL experiment in a smaller group setting (7%). Finally, other suggestions referred to the addition of specific activities such as whole class debates (6%) and individual oral presentations (4%), or the restriction of guidelines to a minimum (4%).

## 5. CONCLUSIONS

In sum, our study contributes to the field of English for Specific Purposes, more precisely Business English, by casting some light on business students' perceptions and attitudes towards the implementation of a PBL project and by showing that a PBL experiment can have a beneficial effect on students' English level. We reported and commented on the results obtained from a student questionnaire that was administered at the end of a 9-week PBL experiment. Overall, we received positive feedback as most students regarded this methodology as being either good or very good and even envisaged the possibility of applying it to theoretical subjects of their own degree. It was deemed important to know their opinions about the activities included in the program in order to improve their learning experience in future years. Thus, pitches were found to be more popular than business memos thanks to their multiple benefits such as the active involvement of students, the development of speaking skills, the stimulation of creativity and imagination and preparation for their future careers. As expected, some of the frustrations expressed by our students coincided with the ones identified previously by Tan

(2003), Macdonald (2004) and Dolmans and Schmidt (2006), e.g. attachment to traditional teaching approaches associated with lack of direction, and the presence of uncooperative team members. We strongly believe that all these problems could have been avoided if students had taken an introductory course on PBL explaining the principles of group learning, self-directed study, time management, among others. However, in our case, students' major problem was the lack of linguistic competence (vocabulary, grammar, speaking skills) which, surprisingly enough, was also cited as the most important learning gain in this PBL experiment.

We also learnt that an inappropriate combination of text features can be the perfect recipe for failure. For instance, when proposing activities we should avoid cognitively demanding problems with too many variables and no context, excessively long descriptions, and a lack of variety in writings. It can also be argued that students' own linguistic problems which prevented them from understanding the case studies used for meetings also caused them to dislike meetings. We think that students' suggestions for improvement prove extremely useful in helping us design an infallible PBL program for the subject of Business English. Therefore, future PBL programs should consider allotting sufficient time for the performance of activities, including a larger pool of writing activities, more personalized feedback on students' writings and using a more appealing wording of problems. Another important aspect to consider for the implementation of a future PBL project is the proposal of activities/experiences that are within students' zone of proximal development as insufficient prior knowledge might generate negative feelings towards certain activities (Vygotsky, 1978).

As for the future lines of research, two proposals might be put forward. More research should be conducted to provide a broader description and analysis of the activities included in all phases of the PBL process. For instance, students could be asked to write weekly diaries so that we obtain recent and more in-depth impressions about the PBL activities performed in class. Finally, it might also be interesting to see what facilitator characteristics are conducive to student learning in the field of Business English. The teacher could use a questionnaire comprising variables such as the facilitator's concern for their students, the degree of knowledge the facilitator has about their subject, and the ability of the instructor to facilitate understanding by providing scaffolds and structure to a topic.

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### Appendix

#### Students' questionnaire

**Question 1.** On a scale from 1 to 5 rate the usefulness and the interest in the activities chosen for the problem-based teaching experiment. (1 = the least useful/interesting and 5 = the most useful/interesting).

Problems	Useful (1-5)	Interesting (1-5)
(1) Video Woody's Tupelo Steakhouse		
(2) Nokia crisis		
(3) Tylenol crisis		
(4) JetBlue crisis		
(5) Hermes Communications		
(6) The Coolest Brands Council		
(7) Kickstarter campaign		
(8) Ethical mobile applications		
(9) NGOs problems		

**Question 2.** Do you think the use of a problem-based methodology could increase students' motivation/interest if it were to be implemented in the teaching of other subjects?

Yes (if so, state which subjects) \_\_\_\_\_

No

**Question 3.** What was your overall view of the teaching methodology? Circle any of the five options:

very poor

poor

average

good

very good

Additional comments

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**Question 4.** Point out the problems you have encountered throughout the experiment.

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**Question 5.** Which of the activities did you like best and why?

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**Question 6.** Which of the activities you didn't like and why?

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**Question 7.** Do you feel you have learned something from this experiment?

Yes

No

Yes and No

If your answer is yes specify your learning gains.

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**Question 8.** Do you feel you have been encouraged to develop your own opinion?

Yes

No

Yes and No

Which activities have encouraged you to develop your opinion?

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**Question 9.** How do you think this experiment might be improved?

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