An e-project-based approach to ESP learning in an ICT curriculum in higher education

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Abstract

The interest in the integration of language learning with knowledge/content construction is growing around the world leading to Content-Based Instruction (CBI) which emphasizes the connection between the skills and information provided in the English for Specific Purposes (ESP) course and the technical material taught in their discipline. Interactive teamwork, critical reading and writing, communication skills, negotiation, presentations are some of the vital soft skills for today's academic and future work environment. Traditionally, ESP involves a lecture mode where academic literacies and skills such as reading comprehension, writing, and vocabulary are practised. This paper discusses and analyses qualitative and quantitative results from the introduction of an e-methodology in two university departments for teaching/learning ESP in the framework of discipline-related, CBI and project work which enhances and modernizes teaching and learning ESP and develops new study habits for learners by promoting self-directed, autonomous, active learning, out-of-classroom learning and by encouraging students' engagement and academic socialisation.

Introduction

The traditional approach to English for Specific Purposes (ESP) education has been to exploit discipline oriented technical text through reading comprehension, vocabulary, grammar exercises throughout the curriculum. It therefore mainly has to do with delivery of language information ignoring the need to connect it with skills. According to many engineering curricula designs, such as Engineering Criteria EC2000, IEEE/Association for Computing Machinery (ACM) Computer Curricula 2001 and accreditation institutions (ABET: Accreditation Board of Engineering and Technology) (Felder and Brent, 2003), graduates should be skilled in clear

communications, teamwork and life-long learning and capable of functioning responsibly in diverse environments.

This work proposes to describe an instructional approach for ESP offered to university engineering students, comprising content-based instruction, which aspires to equip engineering graduates with the necessary skills to survive the academic and professional environment. The challenge of our design work is how to develop an ESP course that allows students to directly and concretely engage in scientific inquiry of Information and Telecommunication concepts that they see of value. The case study involves a course in English for Specific Purposes in a Department of Telecommunications and a Department of Computer Science. The profile of the first classes of freshmen is presented. The educational methodology adopted in the course using tutorials and a project-based learning approach supported by an electronic mode is also discussed. Furthermore, some statistics about assessment of a student class in response to the learning experience, and its respective analysis are shown. And finally their evaluation about this educational approach is presented. Our testing hypothesis here is that Content Based Learning (CBL) realised through an e-project assignment is one of the most appropriate and attractive instructional strategies to be applied in an English for Science and Technology (EST) course delivered in an engineering department.

Background

Language for Specific Purposes (LSP) which becomes ESP when applying to the English language, has been expressed in various ways concerning its content. The diagram illustrated in Figure 1, as introduced by Jordan (1997) defines the generally accepted purposes for which ESP is needed.

Anthony (1997) notes that although ESP is an approach that has been widely used over the last three decades, there has been considerable recent debate about what ESP entails. Typical definitions of ESP can be found in Basturkmen and Elder,2004, Robinson, 2005 and Jarvis, 2004. It becomes obvious that many linguists suggest learning language *per se*, avoiding activating the link between this language and particular academic and professional cultural needs that are about to arise soon in their academic or later in their future professional/vocational life. According to this approach, instructors' efforts should evolve around the teaching of the form, the genre, the language features and literacy skills, the specifics of disciplinary or subject discourses, in brief what they call the common core or else "wide angle" (generalisable skills, applicable to most students and disciplines) or the "narrow

angle or view" (the specifics of disciplinary or subject discourses). For them, LSP is a linguistic issue which involves analysis and research of language in specific events.

In contrast, the interest here is that the learner-centred or learning-centred approach in LSP delivery should not restrict itself to observing learners' linguistic needs, demands, wants, wishes, interests and compelling learners to persistently observe and reproduce the form; rather we need to extent the definition to include appropriate ways for learners to naturally acquire content-specific, discipline related, purpose-specific language. Besides, psychology is equally paramount along with linguistics. Hutchinson and Waters (1987) cite this as one of the reasons that have influenced the emergence of ESP: "ESP has less to do with linguistics and everything to do with psychology".
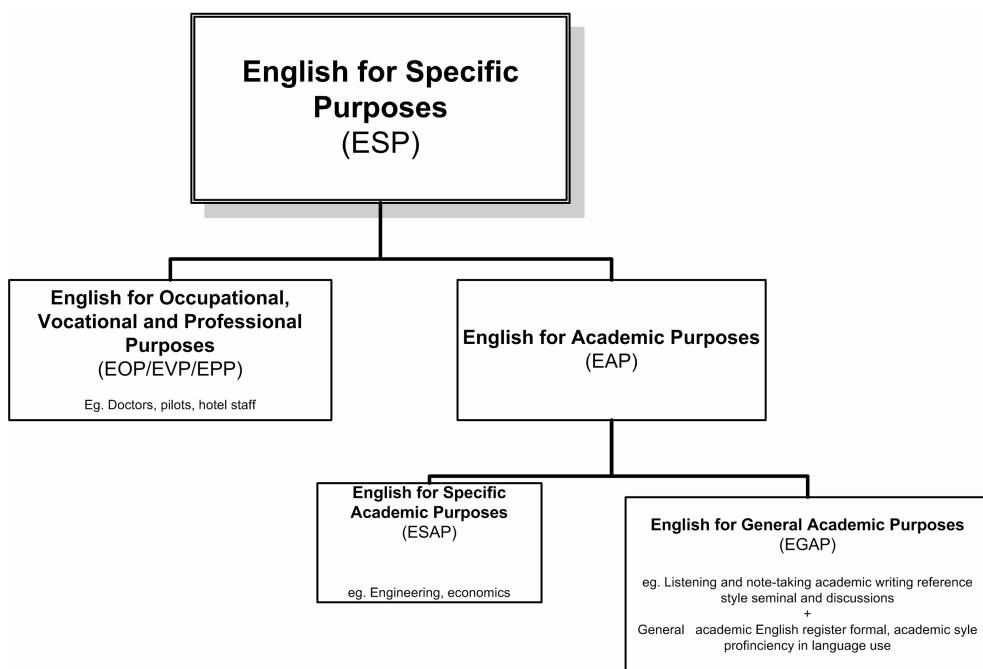
English for Specific Purposes (ESP)

English for Occupational, Vocational and Professional Purposes (EOP/EVP/EPP)

Eg. Doctors, pilots, hotel staff

English for Academic Purposes (EAP)

English for Specific Academic Purposes (ESAP)

eg. Engineering, economics

English for General Academic Purposes (EGAP)

eg. Listening and note-taking academic writing reference style seminal and discussions
+
General academic English register formal, academic syle profinciency in language use

Figure 1. Jordan's model for the categories of ESP (Jordan, 1997)

Since university students – aged 18 and above - obviously fall under the category of adult learners, adult learning framework issues should be also addressed. Sifakis (2003) puts forward an integrative model for ESP curriculum design by bringing together ESP/LSP and adult education in a twofold approach. On the one hand, the

model requires the ESP teacher to come to terms with adulthood-oriented considerations, such as mass-management, motivation and adult learning cycles. On the other hand, it involves both a number of ELT-methodology-specific communicative strategies that are indispensable in the ESP class, such as self-directed learning techniques, as well as enhancing the role of the ESP teacher as counsellor.

Habermas (1978) in his interpretation of adulthood gives the following characteristics which can be exploited in the direction of ESP methodology and pedagogy design, such as personal growth and full development of adults, also regarded as maturity, greater sense of perspective and an ability to make judgments (about themselves and others), and an inherent autonomy, which renders them responsible decision makers, whose motivation (or degree of voluntary participation and personal involvement) is a central prerequisite as far as learning is concerned.

The notion of the "learning contract" is considered a key issue in Adult Education (AE) (Rogers, 1996). It specifies a particular form of educational encounter negotiated among the teacher, the student participants and the organizer, sponsor, agency, if any. This learning contract is expected to set forth:

1. A proper communication between the ESP teacher and the ESP student/ participant;

2. A complete cycle formed by the learning process: learners should be left with a feeling of fulfilment and satisfaction that they have learnt something worthwhile;

3. A sequential and cumulative learning process, built on adult learners' existing knowledge and expectations, in other words complying to the constructivist paradigm; and

4. A voluntarily and purposeful learning process : the ESP learner has to be made fully aware of the methodological principles and the learning objectives underlying the actual teaching process; active involvement of the student participant in the planning process enhances motivation and commitment (Herzberg, 1972).

It becomes evident that adult learners' greater sense of perspective and ability to make judgments based on accumulated experience combined with their inherent autonomy and need for establishing clear goals can be fruitfully implemented in ESP teaching/learning situations. In this direction, making the ESP learner an active participant is imperative.

In addition to above described approaches, the learning theories falling under the three main perspectives of behaviourism, cognitivism and constructivism along with their respective computer applications proposed/devised have been introduced and applied in language learning context (Raptis & Rapti, 2002). Their suitability and effectiveness have afterwards been questioned and new paradigms of language learning have evolved (Hung, 2001; Dalgarno, 2001) and replaced the previous as advocated by Piaget (1960) and Bruner (1990).

Some indicative general research work that has been taken into consideration in our research is Edgerton's 2001 Education White Paper, the widely distributed and influential publication called "The Seven Principles of Good Practice in Higher Education" (Chickering & Gamson, 1987) and a more recent survey titled "The National Survey of Student Engagement" (NSSE) (Kuh, 2001) that deepen our understanding of how students perceive learning. Aspects that deserve attention and have proved essential to substantiate the pedagogical innovation are clustered in the following categories:

1. Active practice, use of active learning techniques and students' participation in the process of learning - interactive engagement (Smith et al., 2005) as according to Edgerton's 2001 Education White Paper "To teach is to engage students in learning"
2. Constructivism, social constructivism (Raptis & Rapti, 2002)
3. Giving prompt and substantive feedback (Raptis & Rapti, 2002, Novak et al., 1999)
4. Providing novelty-based motivation and motive for further exploration
5. Self-pace, individualized learning, student-centered approach that respects diverse talents and ways of learning.
6. Problem-based learning
7. Appropriacy for large classes (large lecture format)
8. Encouragement of contacts between students and faculty (Chickering & Gamson, 1987)
9. Developing reciprocity and cooperation among students
10. Communicating high expectations.

The above mentioned principles are considered by Ruschoff & Ritter (2001) to be the major contribution of constructivism to the current debate on learning theory. He

calls this approach "process-based learning" and is in line with Wolff (1994) who focuses on "learner orientation, process orientation, and learner autonomy". We take the debate a step further to suggest that the best process for adult learning is project work. In what follows, we will try to demonstrate that project-based learning, especially when supported by ICT, reflects these fundamental principles and puts into practice this theoretical framework. However, because constructivism emphasizes the individual dimension of cognition (Hung, 2001), we are more in favour of socio-constructivism because the interpretation and construction of knowledge must be dependent on the cultural and social collaborative context. This is absolutely appropriate for adult learners that need to develop academic and professional/vocational discipline-specific language skills through a collaborative setting. Socio-constructivism, therefore, proves to be the appropriate paradigm for ESP learning in tertiary education in the age of the knowledge society.

Instructional Methodology

Content-based Learning through Project Work in the ESP University Classroom

Having clarified the parameters pertaining to the ESP course methodology, the instructional innovation that can be realised through state-of-the-art computer enhanced media will be discussed. The hypothesis is that content-based instruction (CBI) and project work constitute the most appropriate combination for a methodology that promotes meaningful student engagement with purposeful language and content learning and that the effectiveness of this methodology can be enhanced through an electronic medium. In this work, the medium is a state-of-the-art, learning management, digital application (tool) employed to serve the LSP learning practices, the adult participants and the pedagogy determined.

Integration of language and content has long been supported as a sound teaching practice. In Sheppard and Stoller, 1995 and Robinson, 1991, illustrations of attempts to promote project work in a business English classroom can be found. In the work described hereafter, we are eventually distancing from teaching ESP vocabulary, ESP reading, ESP speaking, ESP listening, since project work involves multi-skill activities which focus on a theme of interest rather than specific language tasks (Haines, 1989). The benefits of selecting "a framework for strategic language and content learning", are numerous for both instructors and learners namely student involvement, critical thinking, responsibility, etc. (Stoller, 1997; 2002). Educational and cognitive psychology also provide persuasive arguments in favour of content-based instruction

as discussed in Singer, 1990, Anderson, 1990, Alexander, Kulikowich, and Jetton, 1994 and Bereiter and Scardamalia 1993.

From a pedagogic/learning theory point of view, the project approach for LSP complies to the new socio-constructivist model since it enhances critical thinking and collaboration skills among peers, develops self-confidence and motivation and trains learners to become autonomous, responsible, life-long learners that can deal with their pressing or about-to-be-pressing content-learning needs. The success of this methodology is down to the fact that learners are pulled through the curriculum by an authentic problem that creates a need to know the material.

Some applications of integrating student pen-and-pencil-based projects into ESP classroom have already been published (Sheppard & Stoller, 1995; Stoller, 1997). In this paper, along with stressing the importance of project work which is in line with content-based instruction for adults, namely university learners, we will take the debate a step further and suggest ways for effective orchestration and planning through ICT. An ICT application, described next, can be used to manage the process of project completion since it can facilitate all ten steps recommended (Stoller, 1997) to be followed by both instructors and students, enable both classroom and distance/asynchronous learning and bring about maximum learning outcomes.

The fundamental steps of a pen-and-pencil-based project completion are the following:

1. Students and instructor agree on a theme after negotiation (general content-area, narrowing down, selecting aspect or aspects of topic), determine the final learning outcomes and structure the project. The learner-centred aspect of this instructional approach must be made explicit right from the start to actively engage learners in the process.

2. Instructor prepares students for the language demands of information gathering, in other words, he identifies language skills and strategies.

3. Students gather information.

4. Instructor prepares students for the language demands of compiling and analysing information/data.

5. Students compile and analyse information.

6. Instructor prepares students for the language demands of the culminating activity.

7. Students present final product and evaluate the project.

ICT comes into play here by providing a reliable way to manage the whole process by ensuring access to the appropriate resources and communication between instructor and learners. Next, we will describe a certain attempt to deliver an LSP course, namely EST (English for Science and Technology), at the department of Computer Science and Technology and the department of Telecommunication Science and Technology of the Faculty of Science and Technology at the University of Peloponnese, Greece, by means of a widely-used, especially in Higher Educational Institutions (HEIs), web-based learning management application: e-Class.

Switching to an on-line project-based instruction

The Setting: Methods, Participants and Material

The participants were eighty 18-years-old native Greek-speaking undergraduate students enrolled in two different disciplines belonging to the Faculty of Science and Technology of the University of Peloponnese, Greece: "Computer Science and Technology" (40 students) and "Telecommunication Science and Technology" (another 40 students). In both departments, ESP is a compulsory subject offered during the first year of studies. Students should receive content-based instruction in English as a foreign language that is tailored to the needs and particular characteristics of each discipline.

The course delivery was of a dual or hybrid form. In its synchronous mode, the ESP course met twice per week for 90 minutes each time during the 1st (winter) semester for the department of Computer Science and Technology and during the 2nd (spring) semester for the department of Telecommunication Science and Technology. The in-class, synchronous teaching entailed:

1. presentation of the course targets, that is the design and writing up of a research project – a "multiple product" (BIE, 2003) to stress the preliminary, intermediate and culminating products that may be entailed - in the field of their studies and its oral presentation in class by locating and exploiting relevant bibliographical resources (eg. e-libraries), respecting the original text (by avoiding plagiarism), paraphrasing, summarizing, synthesizing from the original sources, planning and organizing material to present a 1500 words corpus

2. encouragement to form groups of three for the completion of the tasks. Establishing collaborative work is one of the main concerns, especially since Greek students have not acquired considerable experience of it during their High School years. It therefore proves useful to form groups and make sure that collaboration develops smoothly

3. negotiation between the instructor and members of the group about the project title (neither too narrow not too broad or vague)

4. providing extra help and practice on problematic areas such as paraphrasing the original to avoid plagiarism, using direct or indirect quotations, writing up a list of bibliographies using APA or parenthetic style.

As far as the asynchronous mode is concerned, the e-Class platform was exploited. e-Class (http://eclass.gunet.gr) is an open source learning management system, spawned from the Claroline project, a European open source LMS (www.claroline.net) and developed by the Greek Universities Network (www.gunet.gr). E-Class is used by all major Greek Universities with many hundreds of thousands of users. E-Class is not a platform specially tailored to fulfil the needs of project-based instruction. However, its use for this purpose has proved quite effective, due to its adaptive user interface feature able to deal with different needs of each group of end-user (Prodromou & Avouris, 2007).

Apart from the e-class, the ICT tool that has been employed to provide rich material, resources and interaction, students were provided with a coursebook, namely Study Skills in English by Michael J. Wallace (OUP) to support them in developing skills to effectively go through the various steps of the project completion. It would be too ambitious and far-fetched to encourage first year students to totally rely on the electronic tool since they reach the university classroom carrying High School habits. A sort of transitional period should be allowed before they can reach the point of successfully joining a "coursebookless" on-line course, if ever. For the same reason, face-to-face instruction was applied to provide guidance, encouragement, feedback and advice so that they can work collaboratively and go through all the steps for the completion of the research project. A second book, namely Oxford English for Information Technology (Glendinning & McEwan, 2002) and Oxford English for Electronics (Glendinning & McEwan, 2002) is also used in the Department of Computer Science and Technology and the Department of Telecommunication Science and Technology respectively to boost students' familiarization with technical texts, fundamental notions in the discipline and the relevant language and vocabulary.

Results and Discussion

Evaluation of the electronic methodology

Through this experiment of combining electronic technology with project-based instruction, e-Class enables to:

- make accessible at all times the objectives, learning goals and final culminating product requirements
- present the course syllabus for the project, which comprises a timeline, major activities/tasks set for self-study or group work in or outside the classroom, and important milestones to help students organise work and prevent those with low attendance from getting disorientated, falling behind and loosing track of the course
- announce a list of project topics and manage the formation of groups. Group members were expected to indicate their choice of topic and submit an outline and reading list (bibliography). Feedback from the instructor was necessary in some cases in order to avoid unsuitable topics.
- provide material, information, guidelines and advice on the appropriate strategy, skills and style of the target product
- give prompt feedback on the work submitted electronically
- encourage learners to engage themselves in self-study and self-exploration of useful sites and suitable resources from the Internet (e.g. academic journals, e-books, etc.). On-line activities to practice academic skills relevant to the project (e.g. paraphrasing, summarizing, referencing, etc.) were also recommended through e-Class. Students naturally resort to these in order to keep in pace with the process and fulfil the tasks within time limits. Since they are not mouth fed in class, they have to engage themselves in serious work and find things for themselves and the group they belong to, as they realize their engagement in a process with subsequent steps that cannot be ignored or missed. They are eager to come up with a good product and gain a loud applause from their peer students belonging to other groups on their oral presentation of their project once it is completed. A certain degree of competition can be identified which is a fruitful factor in our case.
- establish communication among students and between student and the faculty member by holding electronic discussions on the online forum of the system and by posting important announcements

The empirical research findings, when combined with the practical advantages of integrating content and purpose-specific language learning, provide persuasive arguments in favour of electronic content-based instruction. The impact of project work is amplified through IT, in this case e-Class, and shares these features/benefits:

1. project work focuses on content learning rather than on specific language targets/tasks, in order to stimulate learners, enhance active engagement and responsibility and develop a sense of ownership in the process, by either selecting a suggested topic or an original one of their own, concerning their discipline.

2. Though the teacher plays a major role in offering support, guidance and feedback at critical moments in the process either during face-to-face instruction or on-line, this is a learner-centred approach because learners are engaged into active exploration, problem-solving, self-management and responsibility. Giving students freedom to immerse themselves in the project actively seeking information, relevant to the topic they are committed to examine, can lead to motivated and independent learners. The instructor inevitably relaxes control of the learners and assumes the role of guide or facilitator (Sheppard & Stoller, 1995).

3. e-Class, and the Web in general, create a more vibrant environment for constructing/acquiring academic knowledge, language and study skills, since they provide readily accessible variety of content resources. Sharing of information and documents, integration of ideas or information from various sources is facilitated and encouraged.

4. The "at- any-time" aspect of the Web is exploited since learners are free to access the platform and take up work at their own pace, anytime, anywhere convenient to them. Timetable difficulties usually prevent university students from attending on-site tuition. The lecture mode is not the unique way to acquire knowledge and cognitive abilities any more. Individualized needs are thus satisfied and certain categories of learners are facilitated.

5. A feedback loop is established between the instructor and the groups of learners. This feedback cycle may occur several times either in class or through the e-Class platform before the final electronic submission of the project work encouraging students to stay current and alert.

6. The "one course for all" policy is abandoned. Besides uniform level education for everybody proved to be a wrong approach (Cristea et al., 2000). This project-based instruction applies customisation and user adaptation by making use of a combination of different backgrounds, different cognitive styles, different learning strategies, motivations, capacities, even hobbies and extra-curricular interest of students involved. It can not been expected to receive final products of same level and uniform quality. Heterogeneity of the end-users -which is common in university classes - is not an obstacle since project-based learning

meets the needs of learners with varying skill levels and learning styles (BIE, 2003) and is thus consistent with individualized learning and the socio-constructivist paradigm. After all, what is of importance here is student engagement in the various steps of the process.

7. Collaborative work over the completion of the project stimulates social interaction and contributes to the psychological adjustment of students to college life, especially when the course is offered early in the beginning of their studies, as in the cases presented here.

8. This approach culminates in an end product (e.g. an oral presentation, a poster session, a report, a research essay) that can be shared with others, giving the project a real purpose. The value of the project, however, lies not just in the final product but in the process of working collaboratively towards the end point. Thus, project work has both a process and a product orientation (Stoller, 1997).

9. It should be clarified that the proposed experiment does not eliminate traditional face-to-face course delivery form. On the contrary, the seminar encounter is there as an add-on function for learners that wish to receive maximum benefit of the course as it provides extensive training, experimenting and practice on the skills required to successfully go through the project stages.

Evaluation of the process

This content/project-based methodology comprising of three variables, namely e-Class, adult learning theory and socio-constructivist pedagogy, can be considered an innovation in the teaching of ESP in Higher Education.

In fact, it moves away from the conventional instructional mode of teaching academic reading, writing, speaking and listening for Computing and Telecommunications for the sake of reading, writing, speaking and listening, respectively and introduces a framework which unites and coordinates all skills under the umbrella "project & presentation". In this sense, students' focus is off the language form and on the language use, thus language becomes the medium for the implementation of the project and the presentation of it in class. This process is supported by the e-Class platform and students result in acquiring knowledge and skills in the foreign language unconsciously, without realising it (43% of participants agreed on this fact. See Table 1). A significant shift not only in the mode but also in the context of learning is witnessed.

Another visible result is the increased rate of student engagement in the process of this paradigm leading to the elimination of previous low attendance phenomena in

the University ESP classroom. Students are more willing to attend weekly classes as they feel that they are acquiring new content and skills, they derive creativity and responsibility whereas it used to be the case that there was nothing to gain from the course in question. In fact, it used to be a common practice among students to refrain from classroom teaching, which although it was the unique mode of instruction students felt that randomly attending or not attending at all made no difference since there was not continuity among classes, no interactivity and need for engagement and commitment. Instead, they thought studying only the material that was required for the end-of-semester exam and only on the day before this final exam was sufficient. It is evident that students are now inclined to participate in the process and follow the various steps leading them to successfully attain the course targets. A sense of belonging to and playing an active role in the structure of the course is developed.

Apart from the aforementioned empirical and informal qualitative research findings based on discussions of the instructor with participants, the quantitative research also confirms that the content-based methodology substantiated by the e-learning tool fosters positive results among students. According to this research which was carried out through a questionnaire distributed to students on the completion of the course, 86% of the students stated that they enjoyed the instructional procedure and prefer this mode of learning instead of the traditional course delivery form (Figure 2). The factors that according to undergraduate students of this devised ESP course account for their positive evaluation are highlighted in Table 1.
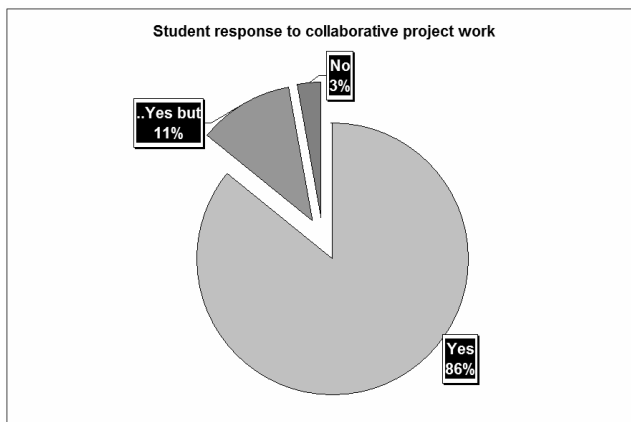

Figure 2. Students' preference for the content-based, project-based learning instead of the traditional instructional mode

Table 1. Aspects of the methodology that the students consider to have proved beneficial for their learning

Reason	Frequency (%)
Collaboration, group work	73%
Innovation	37%
Studying bibliography (internet sites, journal papers, books)	37%
Learning academic English without realising it	43%
Being active learners and learning by doing	53%
Acquisition of knowledge and skills that will prove useful throughout my studies	57%
Exposure to and exploitation of resources through the Internet and in library	50%
Encouragement to orally present their written project in front of their peers using IT	23%

The aspect of the suggested instructional methodology that appears to be the most popular (73%) for students is collaboration among group members. It is worth mentioning that only a few students (9%) complained about partners' indifference and unresponsiveness to the progress of project work, whereas 86% characterised it satisfactory (Figure 3). It can therefore be assumed that this methodology favours
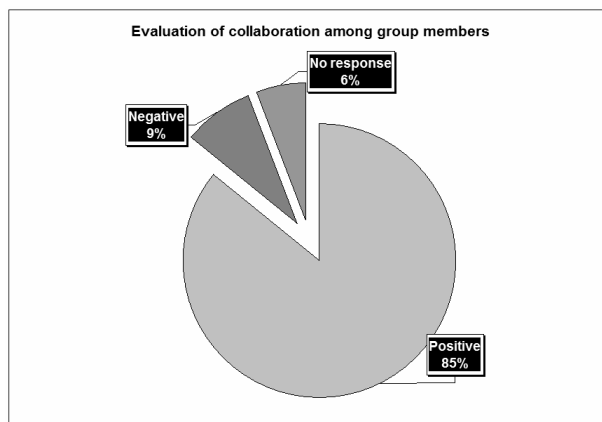

Figure 3. Evaluation of the collaboration that was developed among group member for the purposes of the implementation of project work

collaboration, interactivity, trust and responsibility among adult learners in a University context through research, exchange of ideas and sharing of knowledge, active discovery and exploration in the area they have selected to explore.

Another feature that is appreciated is the fact that they acquire useful skills and knowledge which they consider as a sort of "tools and provisions" essential for the academic life they have recently embarked on (Table 1, item 5-7) By being engaged in realistic practical work, the use of computers and the discovery of resources for academic study as well as the Internet as a research tool, students are awakened to the academic requirements and are provided the chance to fulfil them by gaining self-confidence, responsibility, self-trust and become members of the academic life and emerging knowledge society.

As far as the e-Class platform, it is highly approved by its users as illustrated in Figure 4. They consider it a very effective tool in that, thanks to its asynchronous mode, its easy access any time, anywhere, to useful material, news and announcements necessary for the coordination of the process for project implementation. Students that fail to attend one or more on-site tuition, find this e-learning methodology especially beneficial. Communication among peers and between students and instructor is also enabled and encouraged through this IT tool.
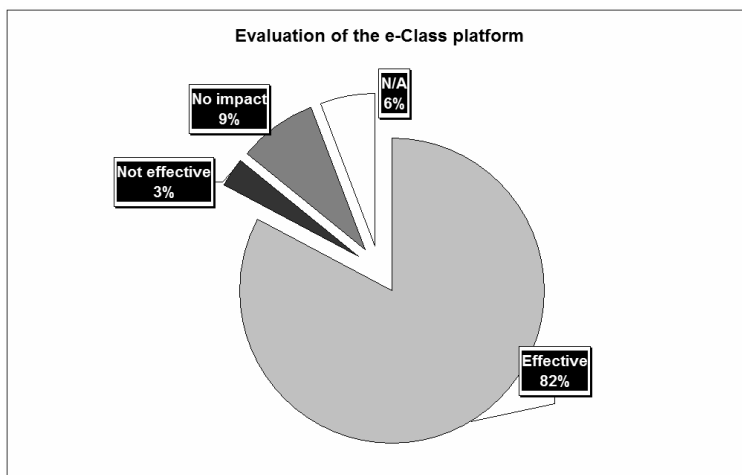

Figure 4. Evaluation of the use of e-Class for the purposes of Project-Based ESP Learning

Finally, in the overall evaluation of the new e-learning methodology it is rated very highly by students as illustrated in Figure 5. They appreciate the novelty-based motivation and challenges posed by this blended ESP learning environment and acknowledge the significant benefits they gain throughout the learning process.
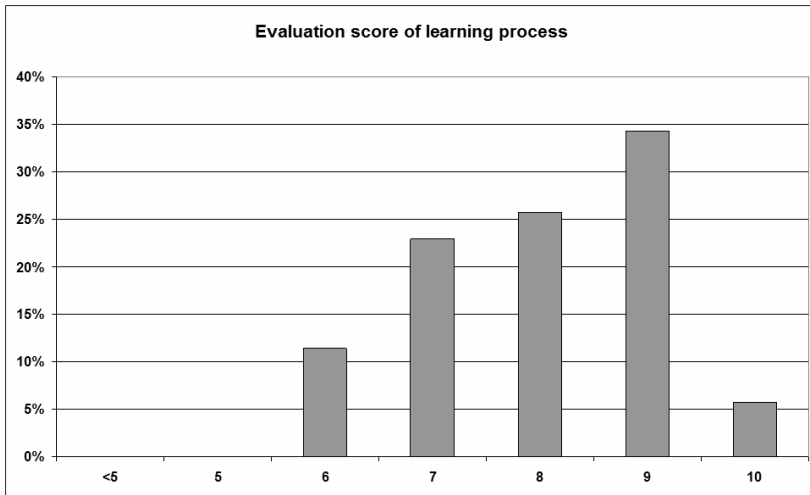

Figure 5. Students' evaluation of the electronic methodology (1=worst, 10=best)

Conclusions

An investigation into current educational and learning theories - sometimes controversial – pertaining to tertiary education and a research into appropriate pedagogy, has provided insight and determined the qualities, policies and features that should be reflected in an e-methodology for LSP course addressing university learners.

The implementation of content-based instruction through project work was the focal point of this instructional methodology. This has been most effectively realised through the customization and incorporation of a learning management system in the longstanding traditional curriculum and mode of teaching and learning. Attention has been paid so that the resulting instructional innovation, which combines synchronous and asynchronous instruction, is compatible with adult instruction design theories.

In conclusion, this model reflects the principles of the socio-constructivist framework and the learner-centred approach. Self-directed learning is central and out-of-classroom learning is also enabled through self-access material and therefore students' responsibility of their own learning is augmented. The first application of students' engagement in an authentic project in the framework of an ESP course for undergraduate students in two university departments was very promising. Not only did it prove highly motivating but also led to positive results concerning both the course learning objective and the feedback received.

Our short-term goal is to have a public release of the readability index (by means of the *Ozasa-Fukui Year Level Program*). Through wider use and the feedback thereby generated, we may better improve the usability of our program. This release will also include a user manual for general users, both in Japanese and English and should prove beneficial in helping EFL teachers apply our readability index for their professional use. In so doing, we believe that they can better determine the grade level for sample English texts and so achieve Palmer's requirement to 'observe the gradation in the study of the semantic aspect of the language'.

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