1. Introduction

High competence in languages is a priority for professionals in the European Union (Council of Europe, 2001). The current trend in tertiary education dictates the development of specialized English language courses which equip students with life-long learning skills and abilities. The University, realizing the urgent need for language courses that would assist language learners not only in their academic but also in their professional lives, supported the development of new specialized language courses.

This paper will describe the four stages of a curriculum development project conducted at the University. To satisfy the academic and professional needs of the students, the Language Centre of the University undertook the challenge of creating new English for Specific Academic Purposes (ESAP) courses following the needs expressed by the departments of Architecture and Biological Sciences for new courses which would help their students develop and improve their language skills. This study emphasizes the necessity for ESAP courses and gives an overview of ESAP approaches and the Common European Framework of Reference for Languages (CEFR,). It discusses the development phases of the project (needs analysis, syllabus design, implementation and evaluation) in relation to the following language learning approaches: Communicative Language Teaching (CLT), Task-Based Learning (TBL), and Technology Enhanced Learning (TEL). The authors conclude with the implications resulting from the implementation and evaluation of the courses in the development of ESAP courses in tertiary education.

1.1. Description of the project

The curriculum development project, which began in September 2008, consisted of four phases: (1) Needs analysis (2) Syllabus design (course development) (3) Implementation (4) Evaluation. In this paper the development of two courses namely English for Architecture and English for Biology will be described.

Data were collected through questionnaires, semi-structured interviews, and instructors’ journals. During the needs analysis phase, the students and academic staff of the two departments as well as English language instructors of the Language Centre were invited to complete questionnaires to provide insight into identifying students’ academic and professional language needs. In addition to the questionnaires, semi-structured interviews were conducted with the faculty of each department. The English language instructors provided feedback on the language competence level of the students in the specific departments. Data analysis revealed the various needs expressed by each department and student expectations from their language courses. The development phase required setting the aims, objectives and the learning outcomes for the courses, selecting and developing materials, and finally designing the syllabi. The implementation phase involved the pilot testing of the courses. Finally, in the evaluation phase synchronous and asynchronous
evaluation of the developed courses was carried out through students’ questionnaires and instructors’ journals.

1.2. Literature Review

The rationale and theoretical background of the project were based on the English for Specific Academic Purposes Approach and the Common European Framework of Reference for Languages.

*English for Specific Academic Purposes*

Over the years, many definitions and categorizations of ESP have emerged. English for Specific Purposes (ESP) refers to the teaching and learning of English for specialised purposes. It is an approach to language learning in which all decisions as to content and method are based on the learner’s reason for learning.

According to Dudley-Evans (1998, p.6), it has three absolute characteristics:

1. ESP is defined to meet specific needs of the learner
2. ESP makes use of underlying methodology and activities of the disciplines that it serves
3. ESP is centered on the language appropriate to these activities in terms of grammar, lexis, register, study skills, discourse and genre.

English for Academic Purposes (EAP) “refers mainly to the academic needs of students and of future professionals who would seek a career in the academic environment” (Ypsilantis & Kantaridou, 2007, p.69). This approach encourages use of the language for studying in academic environments.

For the purposes of the current paper we consider English for Specific Academic Purposes (ESAP) as an approach combining elements from the ESP and the EAP approaches to language learning. It focuses on developing professional and academic skills through content, grammar, lexis, register, and discourse appropriate to the discipline the course is designed to serve.

*Common European Framework of Reference for languages (CEFR)*

The Common European Framework of Reference for languages utilizes descriptors to determine what learners can do at each level. Therefore, in designing the two ESAP courses, the competence descriptors set by the CEFR were considered, as they “need to be operationalized during the syllabus design stage” (Bärenfänger & Tschirner, 2001, p.89).

The framework emphasizes that language learners should be able to “use a language for communication” and it also defines “what knowledge and skills they have to develop so as to be able to act effectively” (Council of Europe, 2001, p.1). The guidelines set forth by the Council of Europe, emphasize that educators need to provide European learners with the
skills needed to handle “communicative tasks in the personal, public, occupational and/or educational domains” (Council of Europe, 2001, p.54). In order for language users to carry out communicative tasks, users of the framework have to engage in communicative language activities.

Furthermore, the CEFR stresses the importance of exposure to authentic use of language in language learning in the following ways: “face to face with native speakers; overhearing a conversation; listening to radio, recordings etc; watching and listening to TV, video, etc; reading unmodified, ungraded, authentic written texts (newspapers, magazines, stories, novels, public signs and notices, etc); using computer programmes, CD ROM, etc; participating in computer conferences on-or-off-line; participating in courses in other curriculum subjects which employ L2 as a medium of instruction face to face with native speakers” (Council of Europe, 2001, p.143). These descriptors refer to language level B2 – C1 (see CEFR descriptors p. 143) which corresponds to the required level of the students finishing the courses. These guidelines were not only considered, but also implemented in the development of the curricula of the ESAP courses.

2. Material and methods
2.1. Needs Analysis

Needs analysis is one of the most important aspects of curriculum development (Brown 1995, Alderson & Beretta 1992, Nunan 2001). In order to determine the needs that would lead to the development of the two syllabi, information was collected from the departments, the students and language specialists. Information included departments’ requirements and students’ perceptions of their needs and language skills. Finally, language specialists provided information on students’ language level and motivation.

Different procedures were employed to collect the data to proceed with the needs analysis. Data were gathered mainly through distributing questionnaires and conducting interviews. The questionnaires were distributed to all stakeholders. The interviews were conducted between the designers of the curricula and content specialists from the departments of Architecture and Biological Sciences.

Student Questionnaires

A total of 42 questionnaires were completed by all first year architecture and biology students. The student questionnaires were divided in three parts. In the first part, information was gathered concerning students’ personal profile: age, nationality, native language, sex and department. The second part collected information concerning the students’ background in learning English (number of years, qualifications obtained, level achieved) and computer skills. The third part required students to comment on their English language abilities, grading each skill separately from a scale of 1 to 3. The skills included in the questions were the following: writing, reading, speaking, listening, grammar, pronunciation, general vocabulary and technical vocabulary relating to students’ studies.
Students were also asked to tick which of the above skills they would like to further practice and improve.

The final part of the questionnaire also included questions on English language needs during students’ studies, future profession, and everyday life with a set of options for students to tick as well as empty spaces for additional remarks.

Departmental Questionnaires

The rationale behind the design and distribution of the departmental questionnaire was based on the need expressed, as mentioned before, by the departments for the development of new English language courses able to meet the current and upcoming needs of their students. Our aim was to identify and analyze this need in terms of skills and abilities necessary both in academia and the professional world. Some of the requirements underlined by this need led us to reconsider aspects such as academic tasks and how these would fit the learning being sought by each department, opportunities to transfer skills to new and meaningful contexts (preferably related to students’ future occupation) as well as getting students actively involved in their learning.

More specifically the departmental questionnaires involved questions on how important the English language is for departmental courses at the university and which particular skills are the most important. Furthermore, members of the departments were asked to comment on the possible future needs of students relating to employment. Instructors were also asked to value their students’ abilities in English in specific areas and to prioritize these skills according to their usefulness. The next part of the questionnaire focused on the academic and professional skills the departments felt that their students should develop in ESAP courses, for example writing bibliographies, paraphrasing, attending conferences and so on.

The departments were also asked to indicate which activities would be appropriate for their students in terms of the kind of reading, writing, listening and speaking tasks they would like their students to be able to tackle. Another issue investigated was the use of pedagogical techniques in courses, such as lectures and reading, class discussions, debates etc. as well as the ability to construct coherent paragraph level utterances, sustain an argument and communicate for particular functional purposes both in spoken discourse and written texts. The type of reading texts appropriate for the students of each department was also examined. Finally, the departments were asked to specify which Information Technology skills they considered students should be developing such as e-mailing, searching the internet, conducting online-library research, preparing PowerPoint presentations.

Instructors’ Questionnaires

The third questionnaire addressed language specialists who had taught students from these faculties in the past. The questionnaire, which was available online, included seven questions about student performance in general English courses. English language instructors were asked to evaluate how the students performed in the course. Special
emphasis was given to student motivation in the course and their participation in activities such as discussions, presentations, group work, film activities, etc.

Furthermore, the English language instructors gave an insight on the students’ abilities, skills and knowledge in the English language in areas such as speaking, reading, writing, listening, note-taking, summarizing, etc.

Interviews

Content specialists with high level of L2 competence and language specialists collaborated closely through frequent meetings, emails, and phone conversations to accurately define the needs of the students and to offer advice and suggestions in order to achieve the best possible result in the two courses.

Semi-structured interviews were conducted with content specialists as they allow “the researcher to ‘probe’ for more detailed responses where the respondent is asked to clarify what they have said” (Gray, 2009). The following questions guided the interviews:

1. Which skills do you consider the most important for your students to develop?
2. How English is used in other modules in your discipline?
3. What kind of tasks will the students be required to complete in English in their academic and/ or professional environment?
4. Which areas (content related) do you think should be covered in the English course?
5. What abilities would you expect your students to have gained after they complete the English course?

3. Results and Discussion

3.1. Data analysis

A qualitative analysis was conducted to indicate the needs of the students and the departments. Analysis of the data gathered from the student questionnaires revealed that students would feel more motivated in ESAP courses. The responses from the student questionnaires and also the language specialists indicated that students were more willing to take English courses that would be designed specifically for their needs and relating to their studies.

The two departments (Architecture, Biological Sciences) required the development of all four skills (focusing on different areas) as well as the need to improve their communication abilities for academic and professional purposes. For example the department of Architecture stressed the importance of improving reading and speaking skills; the department of Biological sciences emphasized the need to improve reading and scientific writing skills.

Language specialists pointed out that students were more motivated and interested when participating in collaborative task-based activities relating to their field of studies.
The results of the data collected by the students, the departments, and the language specialists were considered and translated into discipline vocabulary and content knowledge, general and academic language skills, study skills, everyday talk and information technology skills. After evaluating the results and taking into consideration the different parameters, the two courses were designed.

3.2. Course Development: Approaches and Examples

Course development was based on the results of the data gathered and the following approaches to language learning: The Communicative Approach, Task-based Learning and Instructional Technology. Tasks were designed around discipline related topics from authentic sources such as books, scientific magazines, and the Internet. Furthermore, opportunities for autonomous learning and language practice outside the classroom were integrated into the syllabi.

Communicative Approach

In the 1980s the Communicative Approach or Communicative Language Teaching (CLT) was introduced in the field of language learning, viewing language’s main purpose to be communication. “The starting point for CLT is the use of language in communication – who uses it, how, when, etc. – and the way that these variables are reflected in the linguistic choices people make when they talk, write etc.” (Howatt, 2006, p. 645). Popular activities that were introduced with this approach were the use of authentic language in the classroom as well as exchanges between pupils engaging in real-life situations. Real-life situations are an essential part of CLT, as they are necessary for practicing and achieving communication. The ultimate goal is to teach students how to act and react in real world situations.

Over the last three decades the communicative approach to language teaching and learning has taken many forms, but there is “no single authority, definitive text, or universally accepted model of CLT”, unlike the other approaches and methods in Second Language Learning (Butler-Pascoe & Wiburg, 2003, p.28). We can only talk about accepted practices and principles of CLT, like Nunan’s five features of CLT (1991):

1. An emphasis on learning to communicate through interaction in the target language
2. The introduction of authentic texts into the learning situation
3. The provision of opportunities for learners to focus, not only on language but also on the learning process itself
4. An enhancement of the learner’s own personal experiences as important contributing elements to classroom learning
5. An attempt to link classroom language learning with language activities outside the classroom

These five features indicate the strong connection between CLT and needs analysis concerning the learners’ actual needs. The implications for the current ESAP project are
obvious, since an analysis of learners’ needs was carried out thoroughly, aiming at incorporating communicative authentic real-life tasks into the syllabi that would relate to the students’ academic and later professional lives. The following are examples of how the CLT was implemented in the syllabi.

In the example from the English for Architecture course students are asked to read extracts from an article and discuss them based on the effective writing criteria discussed in class.

Task 1

**Article evaluation workshop**

_Aim:_ To familiarize students with different writing styles which they critically consider and evaluate to improve their own writing.

_Task:_ Students discuss examples of tracing faults in the work of scientists. _In groups of 3-4 people, they read extracts of authentic articles written by professionals and criticize them, tracing faults as in the examples studied earlier._

_Follow-up:_ Each student is assigned an extract of an article for which they need to provide comments of improvement.

In the next example from the English for Biology course the focus is on reviewing abstracts.

Task 2

**Reviewing abstracts**

_Aim:_ To familiarize students with abstract writing and provide guidelines for the production of an abstract.

_Task:_ Review in-class various abstracts on topics related to biology in relation to effectiveness and the elements that make them effective. _Students are assigned topics for the writing task which involves writing a scientific abstract._

_Follow-up:_ Students commence the writing process for their abstract, using a wiki so they can edit and get feedback from the instructor.

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of the CLT approach is the use of tasks, as proposed by the Task-Based Learning Approach. This approach stresses the function of tasks, or activities. “Activities are centered upon practical tasks for students to perform that can be weighted to emphasize oral communication” (Murphy, 1991, p. 53). Butler-Pascoe & Wibug refer to communicative task-based teaching, where students have the opportunity to “use language within a purposeful context” (2003, p. 44) and “share information and work collaboratively to complete a project or solve a problem” (ibid, p.16). According to the TBL approach “tasks involve communicative language use in which the user’s attention is focused on meaning rather than grammatical form” (Nunan, 2006).

The following is an example of a task based on the TBL approach from the English for Architecture syllabus.

Task 3

**Listening to an authentic lecture**

*Aim:* To expose students to authentic language and to provide practice in listening, note-taking and reproducing notes.

*Task:* Students listen to an authentic video-taped lecture of a famous architect and take notes. They review notes from Week 2 on attending seminars and practice “Asking questions”. They listen for a second time and prepare a list of questions.

*Follow-up:* In groups of 3-4, students brainstorm for ideas/issues arising from their notes on the video-taped material they listened to and they present some of these in class.

Another example of task based learning is the combination of a real world task and a pedagogical task as illustrated in the English for Architecture syllabus.

Task 4

**Oral Presentations**

*Aim:* To improve students presentation skills through a content related topic.

*Task:* Students prepare Oral presentations individually or in pairs. In cooperation with the Department of Architecture the topic of their presentations will be to present and describe in class their Studio Projects (3D models of buildings they design in their “Studio” module).

*Follow-up:* Students give each other feedback on their presentation skills in the following session in-class.
Technology Enhanced Learning

Research supports that computers can assist language learning when implemented appropriately in the course curriculum (Beatty, 2003, p.136). Collaboration, autonomous learning, integration of the four skills –listening, speaking, reading and writing–, authentic material, feedback as well as interaction with the computer the instructor, and the learners are some of the benefits attributed to the computer and supported through literature (Beatty & Nunan 2004, Slouti 2000, Levy 1990).

According to Allen (1998, p.1717) the challenge for each teacher lies in “finding ways to apply new technologies to a learning process with proven educational benefit”. Taking the above into consideration, Instructional Technology (IT) was carefully integrated in the developed curricula as the aim was to facilitate learning through the use of specific tools to the extent possible due to classroom equipment limitations. The tasks below illustrate how TEL was implemented in the syllabi.

The example from the English for Biology syllabus demonstrates the implementation of wikis to facilitate and improve technical vocabulary learning.

Task 5

Using the wiki

Aim: To improve and develop students’ technical vocabulary which will lead to the creation of a vocabulary online resource.

Task: After a discussion on how to use online dictionaries, students practise by looking up the meaning of Biology words and they then start a glossary page in the wiki.

Follow-up: Students are given different extracts from an article and have to look up words and add them to the wiki glossary. When they finish they will have an online glossary for the whole article which they will be able to access and use in their academic and professional lives.

A final example from the English for Biology syllabus demonstrates the students’ use of emails for an authentic task.
Task 6

Writing for correspondence: Emails and Memos

Aim: To introduce and provide practice in preparing two kinds of correspondence: emails and memos.

Task: Students are given samples of authentic effective and ineffective emails and memos based on which they discuss in small groups similarities and differences in content, format, style, and tone. After their discussion, they report back to the whole class.

Follow-up: Students write an email to the instructor asking for approval for their poster presentation topic.

3.3. Designing the courses: Limitations and challenges

The following challenges had to be overcome while designing the two courses. Firstly, the students’ level does not always allow for direct exposure to material suggested by the departments. For example, instead of using the whole scientific articles suggested by the two departments as reading material, we gradually introduced these by using extracts and parts of the articles to help the students improve their skills and at the same time satisfy the departments’ requests.

Furthermore, students tend not to consider language courses as primary, and hence do not devote the necessary time to prepare for them. A possible reason for this is that language courses do not link directly to their field of study. Consequently, in designing the courses we also aimed at increasing student motivation by including as much content related material as possible.

Getting faculty members to provide the needed information which would help design the courses was another limitation. They were often unavailable mostly due to their schedule and could not provide requested material or suggestions promptly.

Finally, not all classrooms at the University are appropriately equipped with IT resources: another factor which needed to be taken into consideration by the designers of the courses.

3.4. Implementation

This phase of the project was concerned with the implementation of the new syllabi for the two courses. The Architecture course was implemented for the first time in the Spring semester 2009. The course consisted of two sections with a maximum of 20 students in each one. The participants were all undergraduate students in their second semester of studies. The Biology course was implemented for the first time during the Fall semester 2009. The students were all in their third semester of undergraduate studies in Biological
Sciences. All the courses lasted for 15 weeks, including two weeks for preparation and exams.

3.5. Evaluation

In order to measure the effectiveness of the two courses we needed to collect information. Information gathering and subsequent decision-making comprise an evaluation aimed at course improvement. One of the main uses for evaluation is to make course-improvement decisions (Cronbach, 1963). We believe that the information should be as complete as possible and this, in our opinion, depends on two main factors. The first one is involving students in the evaluation process of the course and the second is making the actual process of evaluation asynchronous as well as synchronous or ongoing, which is a new facet of evaluation since it allows for immediate improvement of the syllabus. This could be achieved by communicating goals and objectives to learners in order for them to know the target learning outcomes and whether these were achieved during and at the end of the course. Furthermore, we expect that as the learners’ competence grows, their needs will expand and change. It is necessary to maintain an open dialogue with the learners, to listen to them constantly in order to adjust teaching methodology and practice to their changing needs and priorities.

Very encouraging data were collected through synchronous and asynchronous evaluation the first time the two courses were taught.

Asynchronous evaluation involved the distribution of questionnaires to the students at the end of the course as well as their grade results. The questionnaires distributed to the students at the end of the course aimed at collecting their evaluations of the content, structure and assessment of the course and their suggestions for improvement in any of these areas. Students were also asked to evaluate the teaching methods, pedagogical techniques and material used by their instructors as to whether these were compatible with the requirements of their departments as well as consistent with their personal needs and interests.

Synchronous evaluation was carried out by the instructors firstly through informal interviews with the students (asking students to comment on various aspects of the course), and the distribution of short questionnaires periodically during the semester. Secondly, instructors kept a journal of how successful each unit or module in the curriculum was and made note of the relevant adjustments to the course while in progress.

3.6. Data analysis of asynchronous evaluation

The data collected from the questionnaires distributed to the students at the end of the semester illustrate that the departments’ requirements regarding skills improvement were met. The majority of the biology students noted they improved mostly their writing skills. This was satisfactory as their department required them to develop scientific writing skills. Architecture students indicated that they improved reading and speaking skills which was

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actually the requirement of the architecture department as well. Diagram 1 illustrates the skill which mostly improved according to the students of each department.

Diagram 1. Students’ evaluation of skills improvement

When asked to comment on the tasks that they thought would affect their academic and professional development students chose the activities that related to task-based authentic learning. The four most popular were the following: reading articles, giving oral presentations, taking notes and/ or summarizing, and improving writing skills mostly through meaningful situations. Other skills include writing bibliography, listening to lectures, researching topics etc.

Student motivation was a key factor in the design and development of these courses and thus an aspect that could not have been overlooked in their evaluation. The students answered a question giving their preferences on a Likert scale where 1 was not at all and 5 extremely motivated. We were very satisfied to see that 79% of our students indicated they felt very motivated during their course. Only 3% of the students said they were motivated. The remaining 18 % indicated that they were quite motivated or extremely motivated. No one answered that they were not motivated at all.

The students’ perceptions of and comments on their courses provided another source of information.

Student Comments from the evaluation questionnaires:

1. “the articles given were useful for our subject” (Arch. Student 7).
2. “we learnt how to read and summarize articles which will be very important in the future” (Bio. Student 3).
3. “we learnt technical vocabulary which helped improve my writing” (Arch. Student 11)
4. “the assignments given to us improved our English skills in Biology” (Bio. Student 17).
5. “instead of taking another language course that will not be useful, we should take another ESAP course” (Arch. Student 20).
6. “we learned many useful things...that we will use in our future career as biologists” (Bio. Student 3)

As far as the final grades are concerned the average final grade for Architecture was 8.2/10 and the average final grade for Biology was 8/10. The fact that all the students successfully completed the two courses with quite high final grades was another strong confirmation of the effectiveness of the courses.

3.7. Data analysis of synchronous evaluation

Data were collected via short questionnaires which were distributed to the students approximately every two weeks. The questionnaires included the following items:

1. Did you find this task useful in relation to your academic needs?
2. Did you find this task useful in relation to your professional needs?
3. How would you improve this task to match your academic and professional needs?
4. Is there a specific topic or activity that you would like to add in or remove from the course?

The data received from these questionnaires were used to adapt the courses to the students’ requirements where possible. The distribution of the specific questionnaires had twofold benefits. Not only did the instructors refine the courses based on the responses but also the students were motivated because they were actively involved in the improvement of the courses.

Another source of information were the instructors’ journals in which tasks and activities were evaluated in terms of effectiveness, usefulness, degree of complexity, student performance and motivation. The data were used to decide on the use of materials and to adjust materials to student level while the courses were being taught.

4. Conclusions

The courses were very well-received, both by the students and their departments. The factor contributing mostly to students’ interest, in comparison to other general academic English courses, is that the ESAP courses are closely related to the students’ studies. Course content is directly relevant to students’ studies; topics are more familiar and often studied in other courses in their mother language, which helps students pay more attention to details. The communicative task-based nature of the courses, which is further enhanced with the
integration of Instructional Technology, motivates the students and encourages them to work collaboratively in order to complete classroom activities.

A key factor to the success of the ESAP project is the procedure of needs analysis. For the project to be successful student and department needs were closely investigated through questionnaires, interviews, meetings and close collaboration with specialists from each department. Task-Based Learning theories, Communicative and ESAP Approaches, and the integration of Instructional Technology also contributed to effective curriculum development and implementation. The outcome was two very well constructed courses that related closely to student studies and were designed to meet their specific content and language needs.

However, the effectiveness of the courses could not be verified without the appropriate evaluation. In order to ensure that these courses are effective they need to be continuously evaluated by all stakeholders, namely the students, their departments and the ESAP instructors. Evaluation of ESAP courses has proven to be extremely useful since it provides insight to their effectiveness and can be used for their improvement.

To conclude, the ultimate aim of the developed ESAP courses was to engage students in the learning process and help them become independent learners throughout their lives. The purpose of the courses was to provide university students with the appropriate academic abilities needed for their studies as well as with the professional abilities they will need in the future. This was achieved on the one hand by exposing students to learner-centered collaborative activities and on the other hand by involving them in the synchronous and asynchronous evaluation of the courses. Learning in this way is more effective because students are more engaged and motivated which should be the main objective of courses offered at tertiary level.

References:


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