Students' reflections on the effectiveness of their ESAP courses: A multidisciplinary evaluation at tertiary level

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This paper reports on the evaluation of English for Specific Academic Purposes (ESAP) programmes at a language centre of a newly established government university in the Republic of Cyprus. In particular, it describes the student evaluation of ten ESAP courses offered to first year students of all 10 departments of the University. This evaluation was carried out after 2 years of full implementation of all the programmes. Using quantitative methods, the investigation explored students' opinion of different aspects of their ESAP course: skills development, course content, materials and tools, as well as pedagogical approaches. The purpose of the project was firstly to determine whether the courses, which were designed and implemented based on a combination of theoretical considerations, methods and approaches (constructivist approach, communicative method, task-based, ESP, CEFR, ICT integration, etc) are indeed relevant to the needs and interests of the students. Secondly the evaluation process was carried out to diagnose possible weaknesses of the courses so that the courses could be further developed and improved.

Keywords: ESP, ESAP, tertiary education, course evaluation: student expectations, skills development, course content, materials and tools, pedagogical approaches

1. Introduction

In this globalised era where limitless communication prevails among people through a variety of channels and for such a great number of purposes including trade and economy, the demand for English for Specific Purposes (ESP) is expanding, especially in countries such as Cyprus, where English is used as a second language. Davy, J., & Pavlou, P. (2001) characterise Cyprus as an ESL country much like Denmark where English has a high enough profile in education to ensure that virtually all educated people have a practical competence available for use in " European and international contexts" (p.214). Moreover the English language operates as a lingua franca for 'out group' communication for migrant groups of non-Greek speaking background (CR. p.31) and for tourists (Language Education Policy profile 2003-2005, p. 16). Knowledge of English in Cyprus is, in fact a decisive factor for success not only for trained professionals but for university students as well. Even in the case of Universities, in which English is not the language of instruction, students often attend lectures by visiting lecturers and continuously have to deal with bibliography and reference materials in English. However English teaching in secondary education in Cyprus is mostly devoted to the development of general proficiency in the language, which as research suggests is not the type of training

required at tertiary level where "more specific objectives based on the learners' needs have to be targeted" (Nebila, 2003,p.388)

Since it started offering its first classes (September 2007), Cyprus University of Technology (CUT) places a great emphasis on equipping its graduates with all the necessary skills, which are considered a priority for professionals in the European Union (Council of Europe, 2001). High competence in languages is one of these skills, which lead the Language Centre (LC) of the university to develop and offer specialised English language courses based on a relatively new approach in English language teaching (ELT); the English for Specific purposes (ESP) approach.

1.1 English for Specific Purposes (ESP)

ESP is an approach to language teaching, which has emerged from the early 1960s. Its origins can be associated, according to Hutchinson and Waters (1987) firstly with two historical events, namely the end of the Second World War and the Oil crisis. Both of these events played a role in establishing the English language as the international language at a time when specific language was required to cope with the global demands. "It could be said that ESP has increased over the decades as a result of market forces and a greater awareness amongst the academic and business community that learner's needs and wants should be met wherever possible" (Brunton, 2009, p. 2). A second factor affecting the emergence of ESP was a move in linguistics from the description of language features by traditional linguists to the focus on using language for real communication, in authentic and particular contexts deriving from a constructivist view of learning which states that "language learners should develop their understanding of the convention of language used by engaging in the kinds of language activity found in real life rather than by learning lists of rules" (Hart, 2003, p.288). The final reason, cited by Hutchinson and Waters (1987) as responsible for the emergence of ESP is a shift from a teacher-centred to a learner –centred approach. Kavaliauskiene (2007) also writes about a new individualised approach to learners "to gain each learner's trust and think of the ways of fostering their linguistic development" (p. 8)

Based on the reasons above ESP is defined as an approach to language teaching in which all decisions as to content and method are based on "the learner's reason for learning" (Hutchinson and Waters, 1987, p.19; Lorenzo, 2005, p.1). Ten years later, Dudley- Evans and St John (1998) provide a definition of ESP –based on Streven's (1988) original definition. Their modified version characterises ESP as an approach designed to: meet specific needs of the learners, make use of underlying methodology and activities of the disciplines that it serves and is centred on the language appropriate to these activities in terms of grammar, lexis, register, study skills, discourse and genre.

As a further subdivision of ESP, English for Academic Purposes (EAP) offers students the opportunity to "equip themselves with the necessary tools to study specific academic subjects"

(Jordan, R, R., 2007, p. 249). EAP has two main strands: it's either common core or subject specific (Blue, 1988a). A common core or English for General Academic Purposes (EGAP) course is offered to all students at Cyprus University of Technology in the first semester of their first year of study. This is aimed at developing or improving the study skills (and the academic conventions attached to them), which are required in an academic environment. Even though the language of instruction at CUT is Greek, students are very often asked to attend lectures or seminars in the English language, use bibliography in English and communicate with English speaking students and professors from other institutions in Cyprus and abroad. Therefore it is considered a requirement that first year students develop or transfer their skills into English so as to be able to perform academically. In the second semester, of their first year and after successful completion of the EGAP course students are required to take English for Specific Academic Purposes (ESAP) course or else a subject specific course. This is a course devoted to the language and genres of specific disciplines and of course to the development or refinement of those academic skills associated with particular fields and their demands. The evaluation project described in this paper concerns only the ESAP courses offered to students of the 10 different departments of the University.

1.2 Description of the CUT LC English for Specific Academic Purposes (ESAP) courses

The English for specific purposes language programmes offered by the language centre of CUT are three-hour per week courses and are aimed at familiarising learners with the specific content, skills and abilities that are necessary in their academic and professional environment. Therefore, each one of these courses includes material and topics relevant to the students' areas of specialisation, specialised work-based activities and practice of specific skills particularly important for each discipline. "Similar attempts have been made in Libya (Robinson, 1985), Saudi Arabia (Roe, 1980), Sudan (Andrews, 1984), Iraq (Tawfiq, 1984), Egypt (El-Said, 1984), Tunisia (Hemissi, 1984), and Oman (Adams Smith, 1984). In the English speaking countries themselves, reference can be made to hundreds of projects aimed at gearing the teaching of English to the specific needs of foreign students (Johns, 1981; Ostler, 1980; Kroll, 1979; Jordan, 1979; Candlin et al. 1979)" as cited in Zughoul, M. R. and Hussein, R.F., 1986, p.146).
 In order to cater more effectively for the different contextual, linguistic and communicative demands placed on the students, skills development was organised around the kinds of tasks that students would be expected to do. For instance, in acquainting learners with genre, students in the field of mechanical and civil engineering are given extensive practice in writing technical reports since this is a very common activity in the routine of an engineer. On the contrary, for students in the field of nursing, it is considered a priority to know how to prepare and complete patients' records, symptoms reports and hospital admission forms.

Similarly as far as the development of speaking and listening skills is concerned the ESAP course designed for the department of Commerce, Finance and Shipping includes activities based on simulations of business meetings, interviews and advertising campaigns whereas students in the faculty of applied Arts and Communication are given opportunities to practise the same skills through activities such as giving online presentations, attending conferences and broadcasting news.

As regards to the development of reading comprehension the focus was on helping learners become more aware of themselves as readers and providing them with an informed database of appropriate research articles (and other relevant material in their specialty area) as well as a suitable repertoire of strategies for processing them. According to a study conducted by Nebila (2003) on how effective developing these metacognitive strategies is in helping students read more efficiently and rapidly in their subject area, it was found that "metacognitive strategy training had a positive effect on students' processing of research articles and could be presented as a supplemental teaching material" (p. 409)

In addition to that, becoming familiar with the lexical, phonological and sociolinguistic knowledge relevant to each discipline is a requirement for all the ESAP courses in order for the students to be able to express themselves clearly, fluently and spontaneously in any given real life situation.

Finally it is considered a necessity for all the courses to cater for the further development of academic skills- such as note-taking and referencing (appropriate for each discipline) –and information Communication Technology (ICT) skills, for example, using the internet, e-mail, online dictionaries and so on. According to Slaouti, (2002) the WWW as a global information service is clearly part of an academic context in that it represents a real-world tool which provides stimulating and authentic data, some of which is relevant to academic study.

1.2 Needs analysis

According to Iwai et al. (1999) the term "needs analysis" generally refers to the activities that are involved in collecting information, which will serve as a basis for developing a curriculum that will meet the needs of a particular group of students. Since the role of needs analysis in any ESP course is indisputable (Mehdi, 2008), in order to design the ESAP courses described earlier analysis of the different needs was the primary issue considered. This was achieved with close cooperation between language instructors and subject area specialists from all the departments in investigating and determining these needs so as to assure the courses' relevancy and validity. This took the form of informal consultation, before and during the implementation of the courses. Such an orientation is considered as a major priority in course design and is strongly supported by literature (Kaur and Baksh, 2010; Chen, 2006; Kaur and Clarke, 2009)

This joint venture included decision-making on the most important factors influencing the courses' design, implementation and evaluation such as goals and objectives, content, material, integration of language and other skills as well as assessment.

1.3 Content, material and Teaching methodology

The "learners' rationale for learning" as defined by Hutchinson and Waters (1987), was mainly the outcome of consultation with academics and professionals from the various departments. This led to a detailed analysis of the situations, in which the learners would have to perform not just academically but professionally as well, as far as content and skills development were concerned. Materials were prepared by the language centre instructors in consultation with the content area specialists, based on their degree of relevance, authenticity, comprehensibility and individual student involvement. Every effort was made so that materials have a very purpose-related orientation. As Gatehouse (2001) believes, it is an essential component of any material designed for specific purposes. Moreover, a clear purpose behind materials also promotes motivation (Dornyei, 2001).

After careful examination of potential material such as articles and books suggested by the department representatives, ESP books, ESL/EFL textbooks, authentic printed and online materials, it was decided that a combination of these would be used according to the needs and requirements of each course These were updated continuously. The aim was to make the materials interesting and relevant to the students who were aware of the importance of the subject-specific material to which they were exposed to, knowing that the particular material was suggested by their department. Once the material was selected it was then processed and adapted by the language specialists who simplified, shortened and adjusted it to cater for the needs of the students in each course. As Gatehouse (2001, p. 10) believes, there is a value in all texts: "curricular materials will unavoidably be pieced together, some borrowed and others specially designed".

According to the Framework, "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). The 10 different ESAP courses developed were based on the most current theories and approaches in language teaching, including, the Communicative and task based approach, and constructivist learning theories as well as the use of new technologies. Moreover the courses took the English for Specific Purposes (ESP) characteristics into consideration to determine the skills to develop, the courses content, contextualised, situational real-like and real life communicative and interactive settings, the materials and tools to be used, the pedagogical approaches to be employed, etc. They were also informed by the Common European Frameworks of References (CEFR) for languages. All ESAP courses were based on specific curriculum development based on the following: the content of the main course of studies (which was delivered in Greek); the English language

needs, which would best serve each course, each professional setting and research in the area (for example reading of specific materials such as articles, reports, etc. listening to presentations, reports and lectures, reviewing, reading and writing articles, making relevant oral presentations, giving instructions, meeting with people in the same field, etc.); input from both academic staff teaching each course and professionals and experts in each field; students input and participation during the implementation of each course; student evaluation of the course and the teaching at the end of each semester.

A characteristic of the ESP approach, which largely influenced the methodology of the courses was self-direction. According to Carter (1983), this involves "a systematic attempt by teachers to teach the learners how to learn by teaching them about learning strategies" (p.132). A certain degree of responsibility was placed on the learners to decide what was important for them, how they would work (in pairs or individually), and whether or not they required the teacher's assistance. As a result, the courses implemented a methodology that is less teacher-directed and more learner- centred. This was aided to a large extent by the integration of Computer Assisted Language Learning (CALL) in the courses, in order to provide learners with more flexibility and autonomy and of course to facilitate learning and empower the courses with the numerous benefits associated with the use of technology in ELT. Some of these benefits, as illustrated through literature include: collaboration, autonomous learning, integration of the four skills, use of authentic material, immediate feedback as well as interaction with the computer, the instructor, and the learners (Beatty & Nunan, 2004; Slaouti, 2000; Levy, 1990)

1.4 Evaluation

One last but very important parameter incorporated into the ESAP courses was course evaluation. As mentioned earlier the courses' goals and objectives were set according to the students' reasons for learning. Thus as an approach to effective course design for ESP learners, the courses had to be continuously evaluated for two main reasons. Firstly, to determine whether these goals are achieved in order to make course –improvement decisions, and secondly as a means of involving the learners themselves in the learning process. According to Davies (2006) survey results indicate that "learners do want and appreciate the opportunity to express their views about their course and wish to exercise some degree of control over the way the course proceeds" (p.8) "If we want to engage learners physically, socially, emotionally" as Vincent (1984, p.40) observes we need to "discover far more about them and involve them in decisions regarding the materials, content and tasks that are selected or designed for them". One way of achieving this is by communicating to the learners the goals and objectives of their course so as to enable them to evaluate whether or not these are achieved. Furthermore we recognise the fact that factors such as learner's growing competence, change of interests, lack of ability or even social change and shift of focus in professional orientation might cause the learners' needs to change during the course (Ritchterich and Chancerel, 1978, p. 32). There fore another way of involving learners is by maintaining an open dialogue with them as they represent after all the main stakeholder in this venture, in order to adjust teaching methodology and practice to their

changing needs and priorities. Involving learners in course evaluation can be very beneficial Waters (1987). He supports that since learners evaluate their courses anyway a better result in refining a course can be achieved if "there can be a rational and frank exchange of views on a continuing basis" (p.7) Furthermore, collecting learner feedback via questionnaire data is considered as a very important educational principle, particularly at tertiary level where this type of surveys are regularly conducted (Conrad, 1999; Long, 1997; Spratt, 1999) This together with the need to assure quality control led the language centre to conduct a questionnaire survey in order to obtain course evaluation data from the students, two years after the ESAP courses were first offered.

Most studies that have been conducted on evaluation in ESP have mostly focused on specific skills, for example the effectiveness of training in metacognitive strategies for reading (Nebila, 2003), or the improvement of the writing skill as a result of web-based, data-driven teaching material (Henry, 2007). Another area of focus as far as evaluation of ESP courses is concerned is that of specialization, for example, investigating the effectiveness of an English course designed for second year undergraduate business students (Kennedy, 1985). This study differs in that it aims at investigating the perceptions of students from 10 different disciplines on more than just a few aspects of their ESAP courses including course content, materials used, tools and pedagogical approaches applied. Furthermore the students were asked to comment on whether their needs and expectations were met and to evaluate the improvement of language, academic and ICT skills, after attending their English courses.

On the whole, these evaluations and students' results and achievements, both during and at the end of each course were the first indications of how successful these courses have been in the three years they've been offered. At the end of these two years, it was decided to conduct a course comprehensive evaluation to determine whether the courses were indeed relevant to the students' needs and interests.

3. Methods

To obtain a comprehensive and overall picture of which exactly were the students' views on their English language courses, we chose a descriptive research design using a questionnaire to gather data from the student population. We convened a core team, including ESAP instructors who had taught ESAP courses, to develop the survey questions. All members of the team had experience in ESAP teaching, curriculum development and course evaluation. The team worked through multiple survey drafts to clarify the function and purpose of each question and to assure that all questions would provide meaningful data.

The subjects were 304 first year students who studied different types of ESAP courses offered by their respective departments during the spring semester of the academic year 2008-2009. The

names of the 10 different departments as well as the percentages of students who took part in the survey from each one are shown in Table 1.

Table 1

Department of Study

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Dept. of Communication and Internet Studies	38	12.5	12.5	12.5
	Dept. of Multimedia and Graphic Arts	39	12.8	12.8	25.3
	Dept. of Agricultural Sciences, Biotechnology & Food Science	13	4.3	4.3	29.6
	Dept. of Environmental Management	22	7.2	7.2	36.8
	Dept. of Nursing	82	27.0	27.0	63.8
	Dept. of Electrical Engineering and Information Technology	30	9.9	9.9	73.7
	Dept. of Mechanical Engineering&Materials Science&Engineerin	19	6.3	6.3	79.9
	Dept. of Civil Engineering and Geomatics	24	7.9	7.9	87.8
	Dept. of Hotel and Tourism Management	16	5.3	5.3	93.1
	Dept. of Commerce, Finance and Shipping	21	6.9	6.9	100.0
	Total	304	100.0	100.0	

As illustrated above the highest percent of participants in the survey is from the department of Nursing with 27%, followed by the departments of Multimedia & Graphic Arts and Communication & Internet Studies with 12.8% and 12.5% respectively.

Our sample was homogeneous in the following aspects: (i) 95% of the students had Greek nationality and almost the same number of students had Cypriot citizenship (ii) Almost all students (98.4%) had Cyprus as their place of permanent residence (iii) Moreover the sample consisted of 70% female and 30% male respondents (iv). Almost all the students were in the age of 18-25 and only 4 students were in the age group of 26-36 (v) 98.4% of the students graduated from a state high school and the remaining 1.6% from a private high school (vi). Finally 80% of the students had been learning English for 6-10 years before they were admitted to University.

The questionnaire developed for the survey consisted of five sections of 25 questions designed to gather demographic information and to determine students' (a) expectations from their English courses (b) evaluation of language, academic and ICT skills before and after their course (c) evaluation of topics, materials and tools used throughout the courses (d) evaluation of pedagogical techniques used (e) overall evaluation of the courses' level of difficulty, usefulness and effectiveness.

The questionnaire was distributed electronically. Each language instructor allowed their students about 20 minutes to complete it. The data from the questionnaires was tabulated on sheets, and the SPSS programme was run to calculate frequencies and means.

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4. Findings and discussion

The findings of this study are reported and discussed under five main headings, based on the five different aspects of the ESAP course students responded on: expectations from the course, skills development, course content, materials and tools, pedagogical approaches and overall evaluation of the courses as regards to their usefulness and difficulty.

4.1 Students' expectations from the courses

In the first section of the questionnaire, students were asked to identify where they would mostly need the English language in their studies (Table 2) and whether they thought these needs were being met by their ESAP course. (Table 3)

Table 2

Where do you need English for your University studies?

Category label	Count	Percent of Cases
Reading and understanding material	247	81.3
Listening to lectures and taking notes	158	52.0
Listening to other study related material in spoken form	122	40.1
Participating in oral communication	158	52.0
Expressing opinions in group discussions	133	43.8
Taking part in seminars	160	52.6
Writing assignments	188	61.8
Writing various text types such as reports, graphs, etc	139	45.7
Searching the Internet for Information	238	78.3
Searching the library catalogue for information	187	61.5
Using technical vocabulary (related to your studies)	195	64.1

A vast majority of the students (81.3%) said that they need English mostly for 'reading and understanding material'. 'Searching the internet for information' was the second most important need as indicated once more by a great percentage (78.3%) of students. Interestingly enough these two needs were among the most important specified by the department specialists and acknowledged by the language instructors. Thus the development of these was provided for in the curricula of all the ESAP courses.

The rest of the needs were also recognised by the course designers and were catered for in the curricula of the ESAP courses with the inclusion of specific activities related to the various disciplines. For example, the use of technical vocabulary (64.1%) was included through reading and processing of subject specific material such as articles.

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With regard to assessing whether these needs were covered by their English course (Table 3) 'Searching the internet for information' comes first with a mean score of 1.97, which means that the specific need was covered to a great extent. A mean score of 2.17 for the second most important need 'Reading and understanding material' indicates that this was also largely covered.

Table 3
How far has your English course covered these needs?

Descriptive Statistics - Mean Scores

	Total
Reading and understanding material	2.17
Listening to lectures and taking notes	2.47
Listening to other study related material in spoken form	2.56
Participating in oral communication	2.47
Expressing opinions in group discussions	2.53
Taking part in seminars	2.87
Writing assignments	2.36
Writing various text types such as reports, graphs, etc	2.54
Searching the Internet for Information	1.97
Searching the library catalogue for information	2.45
Using technical vocabulary (related to your studies)	2.34

Descriptive Statistics - Mean Scores	Total
Reading and understanding material	2.17
Listening to lectures and taking notes	2.47
Listening to other study related material in spoken form	2.56
Participating in oral communication	2.47
Expressing opinions in group discussions	2.53
Taking part in seminars	2.87
Writing assignments	2.36
Writing various text types such as reports, graphs, etc	2.54
Searching the Internet for Information	1.97
Searching the library catalogue for information	2.45
Using technical vocabulary (related to your studies)	2.34

Analysis of the data by department (Table 4) gave us insight into the way these needs differ in terms of importance from one discipline to the other confirming in essence one of the main principles based on which the courses were designed, namely, needs analysis. This was based on an undisputable fact; that any ESP course should be needs driven (Dudley-Evans &St John, 1998, Gatehouse 2001, Graves, 2000). Table 4 shows that apart from the two needs specified as the most important, other, different needs are also highlighted by various departments. This was a positive outcome since in most of the cases these needs were especially catered for in the design of the respective course.

Table 4

Descriptive Statistics - Mean Scores	Total	Dept. of Communication & Internet Studies	Dept. of Multimedia & Graphic Arts	Dept. of Agricultural Sciences, Biotechnology & Food Science	Dept. of Environmental Management	Dept. of Nursing
Reading and understanding material	2.17	2.50	2.23	1.69	1.95	2.15
Listening to lectures and taking notes	2.47	2.61	2.51	1.85	2.32	2.50
Listening to other study related material in spoken form	2.56	2.71	2.46	2.88	2.73	2.49
Participating in oral communication	2.47	2.54	2.54	2.31	2.64	2.37
Expressing opinions in group discussions	2.53	2.70	2.56	2.15	2.73	2.40
Taking part in seminars	2.87	3.23	3.00	2.50	3.57	2.75
Writing assignments	2.36	2.54	2.44	1.77	2.82	2.46
Writing various text types such as reports, graphs, etc	2.54	3.06	2.63	1.92	2.75	2.52
Searching the Internet for Information	1.97	2.13	2.18	1.77	2.05	1.94
Searching the library catalogue for information	2.45	3.11	2.26	2.38	2.90	2.24
Using technical vocabulary (related to your studies)	2.34	3.00	2.30	2.31	2.32	2.19

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Descriptive Statistics - Mean Scores						
	Total	Dept. of Electrical Engineering & Information Technology	Dept. of Mechanical Engineering & Materials Science & Engineering	Dept. of Civil Engineering & Geomatics	Dept. of Hotel & Tourism Management	Dept. of Commerce, Finance & Shipping
Reading and understanding material	2.17	1.83	2.16	2.43	2.06	2.33
Listening to lectures and taking notes	2.47	2.21	2.56	2.70	2.53	2.52
Listening to other study related material in spoken form	2.56	2.30	2.58	2.70	2.69	2.52
Participating in oral communication	2.47	2.27	2.37	2.70	2.69	2.52
Expressing opinions in group discussions	2.53	2.61	2.24	2.65	2.63	2.57
Taking part in seminars	2.87	2.79	2.53	2.52	3.00	2.81
Writing assignments	2.36	2.07	2.11	2.22	2.13	2.38
Writing various text types such as reports, graphs, etc	2.54	2.23	2.26	2.35	2.81	2.48
Searching the Internet for Information	1.97	1.87	1.58	2.04	1.75	2.05
Searching the library catalogue for information	2.45	2.30	2.44	2.22	2.31	2.67
Using technical vocabulary (related to your studies)	2.34	2.38	2.22	2.30	1.94	2.30

For instance the mean scores for the department of Communication and Internet Studies show that 'participating in oral communication' was the third most important need stressed by the students of this department, which confirms our initial assumption that oral communication is essential for this discipline and provisions should be made for practice in that area. Similarly looking at the mean scores received from the departments of Electrical, Mechanical and Civil Engineering we notice that 'writing assignments' is actually the second (or third) most important need covered. This is not surprising considering the fact that engineers are very often faced with the challenge of preparing technical reports as part of their professional routine, a need recognized by the designers of the course. Finally for the students in the department of Nursing 'Using technical vocabulary (related to your studies)' was among the three most necessary activities. This need was once again provided for in the development of the respective course (English for Nursing), since it was anticipated that nurses would very often need to use terminology both in their communication with patients as well as for the preparation of work-related paperwork.

4.2 Skills and other language aspects development

Data analysis illustrates that students' skills show an improvement after participation in the courses. Among the language skills and other language aspects, vocabulary is the one with the highest improvement, followed by grammar and speaking (Table 5).

Table 5

Evaluate your language skills in the following specific areas before and after the course

Descriptive Statistics - Mean Scores

	Total Sample	
	BEFORE	AFTER
Speaking	2.72	2.43
Listening	2.52	2.24
Writing	2.57	2.30
Reading	2.22	2.04
Pronunciation	2.71	2.45
Vocabulary	2.62	2.26
Grammar	2.62	2.33

The improvement of vocabulary and grammar was an expected result since this was provided for through especially designed activities in all four skills. Furthermore, the improvement of skills such as speaking, listening and writing was relevant to the needs expressed by the departments. Close observation of the data received by department thus, demonstrates the improvement of certain skills particularly relevant and important for specific departments (Table 6)

Table 6

Descriptive Statistics - Mean Scores

	Total Sample		Dept. of Communication & Internet Studies		Dept. of Multimedia & Graphic Arts		Dept. of Agricultural Sciences, Biotechnology & Food Science		Dept. of Environmental Management		Dept. of Nursing	
	BEFORE	AFTER	BEFORE	AFTER	BEFORE	AFTER	BEFORE	AFTER	BEFORE	AFTER	BEFORE	AFTER
Speaking	2.72	2.43	2.76	2.50	2.56	2.28	3.08	2.62	3.00	2.55	2.63	2.37
Listening	2.52	2.24	2.53	2.21	2.23	2.03	2.85	2.62	3.14	2.68	2.33	2.17
Writing	2.57	2.30	2.82	2.47	2.41	2.18	2.69	2.54	2.91	2.27	2.54	2.33
Reading	2.22	2.04	2.42	2.18	2.05	1.95	2.54	2.15	2.45	2.09	2.20	2.12
Pronunciation	2.71	2.45	2.74	2.58	2.64	2.46	2.62	2.38	3.05	2.55	2.62	2.39
Vocabulary	2.62	2.26	2.89	2.39	2.64	2.36	2.69	2.31	2.91	2.32	2.46	2.23
Grammar	2.62	2.33	2.82	2.55	2.64	2.28	2.54	2.15	2.77	2.32	2.65	2.44

Descriptive Statistics - Mean Scores

	Total Sample		Dept. of Electrical Engineering & Information Technology		Dept. of Mechanical Engineering & Materials Science and Engineering		Dept. of Civil Engineering & Geomatics		Dept. of Hotel & Tourism Management		Dept. of Commerce, Finance & Shipping	
	BEFORE	AFTER	BEFORE	AFTER	BEFORE	AFTER	BEFORE	AFTER	BEFORE	AFTER	BEFORE	AFTER
Speaking	2.72	2.43	2.80	2.53	2.63	2.37	2.54	2.42	3.00	2.69	2.76	2.33
Listening	2.52	2.24	2.37	2.10	2.42	2.11	2.75	2.42	2.94	2.56	2.71	2.10
Writing	2.57	2.30	2.57	2.20	2.53	2.21	2.42	2.33	2.50	2.31	2.43	2.14
Reading	2.22	2.04	2.20	1.93	2.16	1.95	2.21	2.00	2.13	1.88	2.00	1.86
Pronunciation	2.71	2.45	2.80	2.50	2.58	2.26	2.71	2.42	2.75	2.50	2.81	2.52
Vocabulary	2.62	2.26	2.53	2.13	2.37	2.05	2.58	2.29	2.75	2.19	2.67	2.24
Grammar	2.62	2.33	2.63	2.27	2.42	2.11	2.46	2.25	2.75	2.31	2.29	2.05

Speaking is the second most improved skill for the department of Nursing and this is not surprising if we consider that, based on the requirements of the discipline as mentioned earlier,

activities were designed to achieve this. For example, communicating with patients to complete patients' records or symptom reports. Furthermore, for the department of Mechanical engineering, writing comes second in improvement after vocabulary mainly because special emphasis is given in the course syllabus for practice in preparing technical documents e.g. writing technical reports. These outcomes can be attributed to the designers' attempt to place special emphasis on the development and improvement of specific skills, as requested by the various departments. The variation in the improvement of skills among departments is more evident in the results received from the Department of Civil Engineering and Geomatics. According to these, listening is the most improved skill for the students in this department and this is completely justified if we consider the department's requirement for the development of learners' aural communication skills. This was an extremely important accomplishment since it is common practice for civil engineers to confer and cooperate with clients or other professionals as part of their everyday routine.

With regards to the improvement of academic skills, 'Referencing' is the skill indicated overall as the one with the highest degree of improvement followed by 'Presenting in front of the class', as indicated in Table 7 below. Both of these skills were included in all the ESAP course syllabi regardless of department, as they are considered a necessity by all disciplines.

Table 7

Evaluate your academic skills in the following specific areas before and after the course

Descriptive Statistics - Mean Scores		
	Total Sample	
	BEFORE	AFTER
Referencing	3.01	2.26
Note-taking	2.59	2.14
Presenting in front of the class	2.92	2.30
Listening to lectures	2.54	2.13
Writing related to your studies	2.71	2.21
Reading related to your studies	2.60	2.14
Using the dictionary	2.35	2.02

Interestingly enough, the improvement of certain academic skills other than the ones indicated by the total sample was revealed by the departmental data. This was probably, once again, triggered by the fact that different departments value the development of different skills and abilities. This is illustrated in table 8 below.

Table 8

Descriptive Statistics - Mean Scores												
	Total Sample		Dept. of Communication & Internet Studies		Dept. of Multimedia & Graphic Arts		Dept. of Agricultural Sciences, Biotechnology & Food Science		Dept. of Environmental Management		Dept. of Nursing	
	BEFORE	AFTER	BEFORE	AFTER	BEFORE	AFTER	BEFORE	AFTER	BEFORE	AFTER	BEFORE	AFTER
Referencing	3.01	2.26	3.55	2.42	3.10	2.33	3.92	2.00	3.64	2.14	2.50	2.23
Note-taking	2.59	2.14	2.66	2.21	2.44	2.08	3.08	2.15	2.82	2.14	2.35	2.01
Presenting in front of the class	2.92	2.30	3.11	2.32	3.08	2.36	3.23	2.00	3.05	2.23	2.59	2.22
Listening to lectures	2.54	2.13	2.68	2.18	2.41	2.10	2.62	2.00	2.82	2.18	2.37	2.05
Writing related to your studies	2.71	2.21	2.95	2.45	2.59	2.15	3.38	2.23	2.86	2.14	2.48	2.16
Reading related to your studies	2.60	2.14	2.89	2.29	2.51	2.18	3.15	2.23	2.77	2.18	2.37	2.04
Using the dictionary	2.35	2.02	2.50	2.16	2.49	2.21	2.85	1.85	2.27	1.77	2.20	2.00

Descriptive Statistics - Mean Scores												
	Total Sample		Dept. of Electrical Engineering & Information Technology		Dept. of Mechanical Engineering & Materials Science and Engineering		Dept. of Civil Engineering & Geomatics		Dept. of Hotel & Tourism Management		Dept. of Commerce, Finance & Shipping	
	BEFORE	AFTER	BEFORE	AFTER	BEFORE	AFTER	BEFORE	AFTER	BEFORE	AFTER	BEFORE	AFTER
Referencing	3.01	2.26	3.17	2.27	2.89	2.26	2.46	2.21	2.69	2.25	3.43	2.24
Note-taking	2.59	2.14	2.83	2.30	2.68	2.21	2.58	2.25	2.63	2.13	2.67	2.19
Presenting in front of the class	2.92	2.30	3.17	2.47	2.74	2.42	2.92	2.29	3.00	2.31	3.00	2.33
Listening to lectures	2.54	2.13	2.80	2.17	2.47	2.26	2.54	2.25	2.63	2.13	2.52	2.05
Writing related to your studies	2.71	2.21	2.73	2.30	2.79	2.21	2.63	2.21	2.75	2.13	2.81	2.10
Reading related to your studies	2.60	2.14	2.57	2.17	2.58	2.11	2.63	2.17	2.56	2.13	2.67	2.14
Using the dictionary	2.35	2.02	2.23	1.97	2.42	2.05	2.33	2.00	2.50	2.06	2.24	1.95

'Reading and writing for your studies' were the second most improved academic skills for the departments of Mechanical and Civil Engineering as well as for the department of Commerce Finance and Shipping. Looking back at the curricula of the ten ESAP courses an interesting observation leads us to infer that those skills for which extensive practice was included in the curricula of all the courses were the ones that improved the most. However, in the case of skills like 'writing related to your studies' which were not included in the "academic skills development" section on all the syllabi it seems that the improvement occurred mostly in those situations where the instructor felt these should be practiced. Once more the instructors' decisions were based on the requirements and demands of the specific discipline. This therefore might be a sound reason to consider, analyze, and meet the academic needs of each of the departments separately since these could differ sizably. Chen (2006), and Kaur and Clarke (2009) also reached the conclusion that ESP course designers should explore and identify the learners' potential needs in the first place. Thus, more analysis of the students 'academic needs before the course is designed would be more beneficial.

Finally as far as the ICT skills are concerned, the skill to use 'Online dictionaries' according to table 9 below is the skill with the highest degree of improvement, followed by PowerPoint presentations.

Table 9

Evaluate your ICT skills in the following specific areas before and after the course

Descriptive Statistics - Mean Scores		
	Total Sample	
	BEFORE	AFTER
Internet search	1.79	1.49
E-mail	1.88	1.52
You Tube videos	1.64	1.45
Online Dictionaries	2.09	1.58
Word Processor	1.95	1.64
PowerPoint Presentations	2.06	1.65

Interesting in this analysis is the fact that these skills were the ones less familiar to the students if we consider that "using online dictionaries" and "Preparing Power point presentations" are not among students' most frequently used activities, as opposed to the rest of the activities listed in table 9. Assuming that most of the students in their first year at University have a basic knowledge of computers and are already familiar with the Internet, email and perhaps even YouTube for entertainment reasons, then it might be safe to conclude that the students improved in the skills they were not so competent in. Continuing on the same argument, we wonder if there are more ICT skills that could be valuable to the students but we haven't considered incorporating into our courses.

In order to identify whether there is a statistically significant difference between before and after the course, the Paired sample test was run. Analysis of the data revealed that in our case there was a significant improvement of all the skills between before and after the course as the significant value is always 0.000<0.05. These results confirm that the courses improved students' language, academic and ICT skills significantly, (Table 10)

Table 10

Paired Samples Test

		Paired Differences							
				Std. Error Mean	95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
		Mean	Std. Deviation		Lower	Upper			
Pair 1	Q13_013->Speaking - Q14_014->Speaking	.2928	.54786	.03142	.2309	.3546	9.317	303	.000
Pair 2	Q13_013->Listening - Q14_014->Listening	.2862	.58049	.03329	.2207	.3517	8.596	303	.000
Pair 3	Q13_013->Writing - Q14_014->Writing	.2730	.60890	.03492	.2043	.3417	7.818	303	.000
Pair 4	Q13_013->Reading - Q14_014->Reading	.1842	.55605	.03189	.1215	.2470	5.776	303	.000
Pair 5	Q13_013->Pronunciation - Q14_014->Pronunciation	.2566	.57445	.03295	.1917	.3214	7.788	303	.000
Pair 6	Q13_013->Vocabulary - Q14_014->Vocabulary	.3618	.65046	.03731	.2884	.4353	9.699	303	.000
Pair 7	Q13_013->Grammar - Q14_014->Grammar	.2961	.53075	.03044	.2362	.3560	9.725	303	.000

Paired Samples Test

		Paired Differences							
				Std. Error Mean	95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
		Mean	Std. Deviation		Lower	Upper			
Pair 1	Q15_015->Referencing - Q16_016->Referencing	.7566	1.00820	.05782	.6428	.8704	13.084	303	.000
Pair 2	Q15_015->Note-taking - Q16_016->Note-taking	.4507	.72499	.04158	.3688	.5325	10.838	303	.000
Pair 3	Q15_015->Presenting in front of the class - Q16_016->Presenting in front of the class	.6217	.88160	.05056	.5222	.7212	12.296	303	.000
Pair 4	Q15_015->Listening to lectures - Q16_016->Listening to lectures	.4178	.80826	.04636	.3265	.5090	9.012	303	.000
Pair 5	Q15_015->Writing related to your studies - Q16_016->Writing related to your studies	.5000	.80016	.04589	.4097	.5903	10.895	303	.000
Pair 6	Q15_015->Reading related to your studies - Q16_016->Reading related to your studies	.4539	.82725	.04745	.3606	.5473	9.568	303	.000
Pair 7	Q15_015->Using the dictionary - Q16_016->Using the dictionary	.3289	.81873	.04696	.2365	.4214	7.005	303	.000

Students' reflections on the effectiveness of their ESAP courses: A multidisciplinary evaluation at tertiary level

Dr. Salomi Papadima-Sophocleous, Stavroulla Hadjiconstantinou

Paired Samples Test

		Paired Differences							
				Std. Error Mean	95% Confidence Interval of the Difference		t	df	Sig. (2-tailed)
		Mean	Std. Deviation		Lower	Upper			
Pair 1	Q17_017->Internet search - Q18_018->Internet search	.2928	.63179	.03624	.2215	.3641	8.079	303	.000
Pair 2	Q17_017->E-mail - Q18_018->E-mail	.3586	.68438	.03925	.2813	.4358	9.135	303	.000
Pair 3	Q17_017->You Tube videos - Q18_018->You Tube videos	.1941	.54968	.03153	.1320	.2561	6.156	303	.000
Pair 4	Q17_017->Online Dictionaries - Q18_018->Online Dictionaries	.5099	.85591	.04909	.4133	.6065	10.386	303	.000
Pair 5	Q17_017->Word Processor - Q18_018->Word Processor	.3092	.67226	.03856	.2333	.3851	8.020	303	.000
Pair 6	Q17_017->PowerPoint Presentations - Q18_018->PowerPoint Presentations	.4079	.72536	.04160	.3260	.4898	9.805	303	.000

4.3 Course content, materials and tools

When asked to comment on several aspects of the courses such as topics, materials and tools, the handout/s used throughout the courses received the best mean score (1.94), which means that overall the students evaluated the handouts as very good or excellent. As mentioned earlier, the choice of materials was based on the best available resources for each course. This complies with the claim made by Ansary and Babaii (2002), according to which no textbook is perfect, thus, teachers should have the option of assigning supplementary materials based on their own specific needs in their own specific teaching situation. It was thus very encouraging to observe that the materials especially designed by the language instructors (handouts) were indeed so successful with students. Generally the students evaluated all the materials used throughout the course as 'good' to 'very good'; there was no indication in the data analysis of any negative perception on this matter. (Table 11)

Table 11

Descriptive Statistics - Mean Scores	
	Total Sample
The choice of topics covered by the course	2.06
The materials used throughout the course:	
Textbook	2.19
Handout/s	1.94
Listening material	2.26
PowerPoint presentations	2.12
Selected online material	2.16
Authentic printed material (e.g. articles)	2.25
Authentic online material (e.g. videos)	2.13

With regards to the use of tools/software, students from almost all the departments rated Internet as 'excellent' (mean score 1.56) followed by PowerPoint, Projector and Whiteboard. Almost all the students rated the use of these tools as very good. (Table 12)

Table 12

Descriptive Statistics - Mean S	
	Total Sample
The use of tools/ software:	
Internet	1.56
PowerPoint	1.88
Projector	1.98
Whiteboard	2.00

There seems to be very positive attitude towards the use of ICT tools (and especially the internet), which shows that students realise their importance. It is we believe, in our hands to further equip the learners with the skills necessary to navigate this world of information and to develop strategies for exploiting the recourses available to their academic and professional benefit.

4.4 Pedagogical approaches

Regarding the pedagogical approaches and classroom activities used in terms of usefulness the mean scores obtained show that the most useful (very to extremely useful) classroom activities

are 'Using the Internet (1.73), 'Listening to the instructor's (1.81) and 'Watching instructor's presentations' (1.82).

Table 13
Descriptive Statistics - Mean Scores

	Total Sample
Evaluate the following classroom activities in terms of usefulness:	
Discussions	1.90
Group/Pair work	1.99
Individual work	2.10
Using the Internet	1.73
Listening to the instructor	1.81
Watching instructor's presentations	1.82
Watching other students' presentations	2.05
Presenting your work	2.04
Watching videos	1.89
Using the material you've learned in assignments	1.96
Studying terminology specific to your area of study	1.93

The fact that 'Using the internet' was the first most useful activity followed by 'Watching presentations 'in the third place, once again justifies a very important principle behind the development and implementation of our courses; namely the incorporation of technology.

According to Smart and Cappel (2006), online instruction provides opportunities for learners to be actively involved in learning and to participate in activities, which promote reflective thought and critical thinking. Furthermore, other benefits attributed to the computer and supported by literature include collaboration, autonomous learning, integration of the four skills (listening, speaking, reading and writing), authentic material, meeting the individual needs of learners, feedback, as well as interaction with the computer and among the learners (Beatty & Nunan, 2004).

Another technology application, the use of authentic videos related to the students' area of interest was also among the first three most useful classroom activities for students in the departments of Communication and Internet Studies, Agricultural Sciences, biotechnology and Food science, and Nursing as shown below.

Table 14

Descriptive Statistics - Mean Scores

	Total Sample	Dept. of Communication & Internet Studies	Dept. of Multimedia & Graphic Arts	Dept. of Agricultural Sciences, Biotechnology & Food Science	Dept. of Environmental Management	Dept. of Nursing
Evaluate the following classroom activities in terms of usefulness:						
Discussions	1.90	1.79	1.74	1.69	1.77	2.16
Group/Pair work	1.99	1.89	1.87	1.92	1.86	2.15
Individual work	2.10	2.08	1.92	2.00	2.18	2.16
Using the Internet	1.73	1.53	1.67	1.54	1.55	1.99
Listening to the instructor	1.81	1.71	1.59	1.62	1.59	2.10
Watching instructor's presentations	1.82	1.89	1.59	1.69	1.68	2.04
Watching other students' presentations	2.05	2.45	1.69	1.92	1.86	2.16
Presenting your work	2.04	2.21	1.74	1.92	1.82	2.18
Watching videos	1.89	1.76	1.85	1.62	1.95	1.88
Using the material you've learned in assignments	1.96	1.84	1.69	1.92	1.95	2.10
Studying terminology specific to your area of study	1.93	1.79	1.77	1.69	1.91	2.00

As Slaouti (2002) claims "the web brings a network of authentic texts that illustrate a whole range of genres from specialist to generalist, from subjective opinion to substantiated academic argumentation. By adopting an approach to exploiting the Web in the EAP context which actively encourages constant evaluation, this might just provide a non threatening platform for students to develop those critical awareness so often demanded of students in tertiary education" (p. 121)

4.5 Overall evaluation of courses

The last section of the questionnaire comprised an overall evaluation of the courses with regards to several aspects such as difficulty and usefulness. In regards to difficulty of the course, students found the courses to be 'not very difficult to quite difficult' with a mean score of 3.52. This was not surprising, considering the fact that these courses are generally more demanding than General English courses. Furthermore in ESAP courses students need to work harder since they are required to study specialised material, which may be totally new to them. Furthermore, having to deal with authentic and specific language appropriate for communication in meaningful situations is an approach to language learning unfamiliar to students.

Nevertheless according to the mean scores (Table 15) obtained in regards to the overall usefulness of the courses, students evaluate the courses as very useful.

Table 15

Descriptive Statistics - Mean Scores		
	Total Sample	
Overall how would you evaluate the course in terms of…….		
Difficulty	3.52	
Usefulness for your future academic and professional activities	1.92	
The course as a whole	1.92	
Meet the needs of students in specific areas of studies	1.89	
The English course has equipped you with the necessary knowledge for your future academic and professional development	1.89	

5. Conclusions and Implications

The results of the survey conducted revealed that students highly appreciate the ESAP courses offered by the language centre of Cyprus University of Technology. The most important needs, according to the students' perceptions are covered by their courses to a great extend and this was one of the main concerns of this survey. Apart from that, there seems to be improvement of all the necessary skills as shown by their evaluation before and after the course. The reported differences between skills development among various departments is an indication that needs analysis was successful.

Furthermore, our decision to use a combination of materials (textbook, handouts, online material, etc.) for each course, depending on their appropriateness and not their practicality, was appreciated by the students who rated most of the components of their courses as very useful. The students also acknowledged the importance of the pedagogical approaches and classroom activities used. Finally the most significant revelation was students' acknowledgement of how useful the incorporation of technology is in their courses, which might be an indication of correct use of technology to support language learning. 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 this into consideration, Instructional Technology (IT) was carefully integrated in the developed curricula. The aim was to facilitate learning through the use of specific tools to the extend possible, due to several limitations such as classroom appropriacy in terms of equipment, students' unfamiliarity with computers, internet access and so on

Limitations and Challenges

The following challenges had to be overcome in the development, implementation and evaluation of the courses.

Firstly the preparation of ESAP courses is much more demanding than the one required for traditional language courses. Apart from the fact that joint effort and a lot of coordination was required by a group of content and language specialists to agree on the courses' design, the materials suggested by the content specialists were not always appropriate to the students' level and thus a lot of time and effort needed to be placed on refining and adjusting the resources

before these were to be used in the language classroom. Consequently in order for language instructors to be able to design and teach a course they needed to study and familiarise themselves with the content specific material of the respective discipline. Furthermore, as pointed out earlier in this paper the content, materials and resources used in ESAP courses need to be authentic and closely related to the students' areas of interest. Thus they need to be constantly reviewed and renewed in order to be up to date with recent developments in the respective fields.

Moreover, as far as the use of technology is concerned, several factors may cause technology applications in the classroom to be ineffective. These factors include: instructors' and students' unfamiliarity with ICT tools, instructors' lack of knowledge on pedagogical applications of technology, inappropriate or inoperable equipment in classrooms and so on. All of these might lead the participants in a course (students and instructor) to lose interest and motivation or to feel that they are placing too much effort into their learning without obvious benefit.

A limitation of the study is that data was received only from the students; therefore their perceptions constitute the only data as to the effectiveness and usefulness of the ESAP courses. We believe that it is equally important to examine the views of the language instructors, especially concerning the improvement of skills after participation in the courses. Furthermore, samples of students' work before and after the course could be analysed to assure that the courses are indeed effective.

Implications for the future

The most important conclusion highlighted by our survey is that ESAP courses are very effective and highly appreciated by students. The main reason contributing mostly to students' appreciation, in comparison to other general academic English courses, is that the ESAP courses are closely related to their fields of interest. Course content is directly relevant to students' studies; topics are more familiar and often studied in other courses from their discipline, which makes students feel more motivated and engaged in the learning process. This should be the main objective of courses offered at tertiary level Therefore it is recommended that ESAP courses be offered to University students not only in their first but in their subsequent years of study as well.

In addition to that, needs analysis has proven to be a key factor in the development and implementation of the courses and especially in the improvement of specific skills because of their identification and inclusion in the course syllabus. This might be an indication that more careful needs analysis of the academic skills associated to each discipline may be further beneficial in the future. Apart from that the perceptions of professionals from each field could be valuable in defining needs.

Moreover it is evident that, continuous evaluation of ESAP courses should be a practice and should be conducted by all stakeholders involved to ensure quality control.

Finally a tool that clearly provides an aid to learners in the learning process according to this study is the use of technology. Students support the use of Internet and other ICT tools in many respects and this can only lead to one more implication. Technology should be integrated into language learning to the biggest possible and educationally appropriate extent.

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