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**English for Specific Purposes in the EFL Context:
A Survey of Student and Faculty Perceptions**

Author

Chia-hsiu Tsao

Fooyin University

Biodata

Chia-hsiu Tsao is a full-time lecturer at Fooyin University of Technology, where she has been teaching various English courses to EFL learners for nearly twenty years. Her research interests include language-learning motivation, learning strategies, needs analysis, and factors that affect foreign language learning.

Abstract

This study reports on a questionnaire survey carried out with 351 students and 23 instructors in a technological university in Taiwan about their attitudes toward English for Specific Purposes (ESP) and related issues. Major findings of this study include: (1) Students favored ESP more than English for general purposes (EGP) while teachers were more reserved about the idea of replacing EGP with ESP; (2) Although both faculty and students recognized the importance of ESP, neither considered students' English proficiency up to the level needed to cope with the ESP course requirements; (3) Both sides agreed that although ESP courses should differ from EGP in their objectives, materials and approaches, they should still focus on the training of language skills while integrating specialized terms and discipline content into the course; (4) The two sides disagreed on whether English should be the only medium of instruction, to which the students give stronger support than the teachers; and (5) Regarding the factors that may affect the effectiveness of an ESP course, there is a notable difference of viewpoints between the two sides. The top-ranked factors,

which were all student-centered, are as follows: student needs analysis, students' learning capacity, and students' learning motivation. In contrast, the teachers emphasize more the course itself, placing teaching materials and methods as the top concerns, course objectives and design the second, and student needs the third. Based on these findings, this paper concludes with pedagogical implications and suggestions for future research.

Keywords: ESP (English for specific purposes); EGP (English for general purposes); specialized English; needs assessment

1. Introduction

As English continues to dominate as the lingua franca of business, media, technology, medicine, education, and research, the demand for ESP is growing rapidly, particularly in EFL countries where English is mainly used for instrumental purposes (Tsao, 2008; Xu, 2008). People in these countries learn English in order to fulfill the school curriculum requirement, to pass standardized English proficiency tests, or to obtain promotion or professional development at work. In response to the great demand for English in academic, vocational, and professional contexts, more and more universities in Taiwan are offering ESP courses to meet the global trend as well as to meet students' future career needs.

The demand for ESP has led some higher education authorities and administrators in Taiwan to claim that ESP should replace EGP, the long-existing practice of English language teaching in Taiwan's universities, and thus become the mainstream of college English education (Chen, 2008; Hsiao & Lin, 2002). The rationale behind their claim is presumably as follows: EGP is basic language learning to be studied before, but not during college; College English should be more advanced, more specialized, and match students' majors of study, particularly in technological universities where students are trained to perform on-the-job; and finally, compared with EGP, ESP is more effective in increasing students' learning motivation because it relates to their fields of study and caters to their needs (Chen, 1993).

Since students' overall English proficiency is generally believed to be an indicator of the success or failure of English education, the value of general English courses offered in local universities has been questioned ([The China Post Editorial](#), 2007). The extremely low percentage of students in Taiwan, particularly those from

technical universities, who are able to reach the CEF¹ A2 level of proficiency by the time of graduation, further justifies the inefficacy of general English education. Since the merit of EGP has been questioned, a shift from EGP to the more focused and career-oriented ESP seems worth an attempt. Many in Taiwan, including educators and administrators, consider ESP a potential ‘panacea’ for students’ poor English performance. They believe that students will be more motivated and benefit more by a program geared to their needs and directly relevant to their fields of study, thus resulting in higher learning efficacy. However, before implementing ESP instruction, some necessary preparation needs to be made, such as conducting needs analysis to identify students’ needs and expectations. In addition, many factors need to be taken into consideration, including teacher qualification, learner proficiency, teaching materials, large classes, and limited teaching hours. Moreover, teachers’ and students’ attitudes toward ESP require closer examination, because they are the ones who are directly involved in the course and who also play determinant roles in shaping the outcome of the course. As such, their opinions can provide valuable information for program directors, curriculum planners, and others who are responsible².

Therefore, this study, by taking a private technological university in Taiwan as a case of investigation, attempted to compare and contrast teacher-student perceptions while obtaining answers to the following questions:

1. How do students and faculty view ESP as compared with EGP?
2. What do students and faculty think of student readiness for ESP?
3. What is required of ESP instruction?
4. What are the potential problems facing ESP in the EFL context?
5. What factors may affect the success of an ESP course?

¹ CEF is the short form for Common European Framework of Reference for Languages: Learning, Teaching, and Assessment. It is a guideline used to describe achievements of learners of foreign languages and is comprised of six scales, moving from beginner to expert: A1, A2, B1, B2, C1, and C2. It has been adopted by the Ministry of Education of the Taiwanese government as the island-wide benchmark for measuring English proficiency of local college students.

² In recent years several ESP centers or programs have been launched in various colleges or universities in Taiwan with a purpose to bridge the gap between students’ English proficiency and the requirement for their major field of study (Tsou, 2009).

2. Literature Review

2.1. Definition of ESP

Differences exist in how people interpret the meaning of ESP. Hutchinson and Waters (1987) defined ESP as "an approach to language teaching in which all decisions as to content and method are based on the learner's reason for learning" (p. 19). Strevens (1988) described it as English language teaching which is designed to meet specified needs of the learner. In the view of Chen (1993), ESP is "a major specialization within the discipline of English language teaching" (p. 80). Still, others specified ESP as the teaching of English for academic studies, or for vocational or professional purposes, as opposed to EGP, English for general knowledge and skills (Brunton, 2009; Carver, 1983; Hyland, 2006). Hence, we have such acronyms as EAP (English for academic purposes), EOP (English for occupational purposes), EMP (English for medical purposes), EBP (English for business purposes), and EST (English for science and technology). All of these are part of the ELT (English Language Teaching) repertoire. Whatever name it assumes, ESP is now a term connoting promise for more effective and more useful English language instruction (Tsou, 2009; Yogman & Kaylani, 1996).

2.2. Implementation of ESP

Sysoyve (2000) introduced a framework for the development of an ESP course. The framework started with student analysis, followed by formulation of goals and objectives, content design, selection of teaching materials, course planning, and course evaluation. In addition, he suggested that course development be viewed as an on-going process, with necessary alteration by the teacher to suit student interests and needs even while the course is in progress. Thus an ESP course should be a customized program, which caters to a certain group of learners with a specific purpose and enables them to prepare for professional communication at future workplaces.

In addition to students' specified needs for English, their learning capacity is also a very important factor that needs to be considered when developing an ESP course. As suggested by Wong (2005) and Huang (2007), students should have a reasonably good command of general English in order to learn ESP successfully. One important question that should always be addressed before implementing an ESP course is: Are the course objectives attainable with the students' current language

levels? In other words, how can ESP instructors design a course based on a more realistic student analysis, so that the course matches students' English ability and arouses their interest?.

According to Dudley-Evans and St. John (1998), the ESP instructor has as many as five key roles to perform: teacher, course designer and material provider, collaborator, researcher, and evaluator. Prior to teaching, the ESP instructors need to formulate the goals and objectives before they determine the content and select appropriate teaching materials for an ESP course. It often happens that the ESP practitioners may need to work with and even team teach with the subject specialists. They should also engage in classroom action research to solve instructional problems and improve teaching practice. And they should evaluate their course regularly to identify students' learning problems and to make proper adjustments. As we can see, to be an effective and competent ESP teacher is absolutely no easy task.

2.3. Empirical Studies of ESP

A multitude of studies have been dedicated to ESP-related issues in Taiwan. Issues discussed ranged from course designs (Chang, 1992), types of ESP courses or materials (Huang, 1997; Yang, Chang & Kao, 1994), learners' needs (Lee, 1998; Yang & Su, 2003), to reading strategies (Hsu, 2008) and vocabulary-learning strategies (Yang, 2005). In order to provide an insight into the ESP movement in Taiwan, we will review some of the more recent empirical research relevant to the interest of this study in more detail.

Huang (1997) conducted a large-scale survey to probe into the attitudes of five different populations—program coordinators, English language teachers, subject teachers, university freshmen, and graduates from 18 universities in Taiwan—toward the need to offer ESP courses under the general English curriculum. Her study found that program coordinators were divided in their attitudes towards the issue, with 7 out of 18 holding positive attitudes, 3 unsure, and 8 negative. The coordinators who supported the practice recognized the value of ESP and believed that students would benefit from ESP, while those who opposed cited reasons that included: (1) Language teachers lacked qualifications for teaching ESP; (2) Students' own departments should be responsible for offering ESP; (3) General language skills were more important for students; and (4) Students could acquire ESP naturally while studying their major subjects. In contrast, the attitudes of the remaining four groups were quite positive;

that is, they generally supported the idea of integrating ESP into the general English program. Huang also found that at the universities where ESP was integrated, it was only offered to a small extent and that the variety of ESP courses was very limited, with most of them related to news and business. Obviously, students' need for ESP at the time was not well met.

Assessing the English needs of nursing professionals, Lee (1998) compared in-service students with full-time students in a junior college of nursing and found that the former were more concerned about using English to communicate, such as describing nursing procedures, expressing comforting and greeting, and conversing in outpatient departments, while the latter expressed a stronger need for more fundamental tasks like learning medical terminology. Tsai (2001) conducted a similar but larger study, using a more refined questionnaire. Her study results demonstrated consistency between the "expectation needs" of nursing students and the "in-service needs" of nurses: both groups placed the need for developing communication ability above the need for learning language components and the need for professional training.

Unlike most ENP studies which chose students and in-service professionals as the subjects, Lee and Joe (2006) surveyed 169 nursing supervisors from local hospitals. They found that linguistic competence needs were deemed as important as communicative competence needs, and that either in EGP or ENP courses, listening and speaking abilities were regarded as the top two priorities, and that ENP courses should be given more emphasis than EGP courses.

A comparison of needs between medical school students and interns revealed that medical students most wanted to comprehend medical textbooks or journals written in English, while interns hoped to write and publish English medical reports or attend international medical seminars (Shen, 1996). Following Shen, Chia et al. (1999) investigated how medical students and faculty perceived the English needs for medical studies and derived the following findings: (1) Among basic language skills, listening was considered the skill most needed to be improved by freshmen; (2) Reading was ranked as most important for medical studies, followed by listening, writing and speaking; (3) The best pattern of curriculum design perceived by both was general English in the freshman year, followed by three years of specific elective English; and (4) Limited vocabulary and slow reading speed were singled out as being the most common problem.

Liang (2007) integrated ESP components into her Freshman English for Leisure Management students by combining subject matter (travel and tourism) and language learning. She adopted a variety of communicative activities to engage her students in the learning process, particularly role plays and oral presentation that allow real communication to happen. As a result, her students reacted favorably to the course. The successful implementation of ESP in her class implied that ESP can be integrated into college language courses as long as students' English proficiency and motivation are taken into account in the first place.

From the studies reviewed above, we can see that abundant research has been devoted to the field of ESP, and yet very few studies have been conducted to investigate how English faculty and students perceive ESP learning and teaching in an EFL setting, thus making the undertaking of the current study significant.

3. Methodology

3.1. Participants

This study involved 24 English teachers and 351 students from a technological university in Taiwan. The teachers surveyed included 19 lecturers, 4 assistant professors, and 1 associate professor, aged between 31 and 55. Eleven teachers had teaching experience of over 15 years, 6 between 11 and 15 years, the other 5 between 6 and 10 years, and 1 within 5 years.

The students surveyed were chosen based on stratified sampling (Gall, Borg & Gall, 2003)—a sampling technique in which the entire population is divided into groups, and a random sample of these groups is selected to make sure that the sample is representative of the larger population under study.

3.2. Procedures

The questionnaires to the teachers were either given to them in person or placed in their mail boxes. A total of 29 questionnaires were distributed, and 24 returned.

The survey to the students was administered by the researcher herself, who first obtained the permission of the instructor whose students had been chosen to answer the questionnaires. Before the survey began, the researcher explained the content and purpose of each questionnaire section to make sure the students knew how to answer it. Among 400 questionnaires that were issued, 351 valid responses were obtained, after incomplete ones were discarded. The sample, which had an

average age of 20.7 and an average time of 7.8 years in learning English, comprised students from various departments and in different years of study.

3.3. Instrument

A questionnaire written in Chinese and entitled "A Survey on ESP Instruction" (see Appendix 1 for the English translation) was developed by the researcher to serve the research purpose. The same questionnaire was adopted for both the students and the faculty with a view to comparing their perceptions. A pilot survey was conducted on 10 students and 3 English teachers before it was edited into the present format, which consists of three sections: three questions on the subjects' background information; 21 questions that probe into the subjects' attitudes toward ESP instruction, with responses rated on a 5-point Likert scale, ranging from "strongly agree" to "strongly disagree", and one multiple-choice question concerning the most important factors for the success of ESP. The 21 questions in part two were further broken down into four sub-sections, with 6 questions inquiring about how students and faculty view ESP as compared with EGP, 7 about whether students are ready for ESP instruction, 4 about what is required of ESP courses, and the last 4 about the potential problems facing ESP. The Cronbach's alpha coefficient for this scale was 0.85 for the students and 0.71 for the teachers, indicating that the scale measured responses with satisfactory internal consistency and accuracy.

3.4. Data Analysis

SPSS for Windows was used to perform the following analyses: First, an internal consistency reliability test using Cronbach alpha was conducted to obtain the reliability of the scale. Next, descriptive statistics, including frequencies, mean, and standard deviation, were estimated. Finally, independent t-tests were run to determine if there were any significant differences between students' and teachers' responses.

4. Results & Discussion

4.1. How Is ESP Compared with EGP?

As compared with EGP, ESP is obviously more appealing for both the students and the faculty according to Table 1. Both parties are quite consistent in their responses to items 2, 4, 5, and 6 of the questionnaire (t values are .94, .99, .94, and 1.29 respectively, none reaching the significant level of $p < .05$). More subjects agreed than

disagreed that ESP is superior to EGP in such aspects as having more specific goals, being more effective in promoting students' learning motivation, learning efficacy, and employment competitiveness.

The only significant differences between the two parties are found in items 1 and 3. When asked whether ESP should replace EGP to become the mainstream of college English education (item 1), the teachers were mostly opposed (58.3%, including those who disagreed and strongly disagreed) while the students were largely indecisive (48.4%). But still, there were more students who agreed (29.5%) than disagreed (21.8%). The result implies that students in general favor ESP more than EGP while teachers hold a more dubious attitude toward ESP becoming the core of English teaching at the tertiary level. A possible explanation for this discrepancy of opinions between the two parties is that students are not satisfied with the existing EGP instruction and hope for a change, while teachers either consider EGP a foundation for ESP or do not think such a substitution would lead to a better result.

The significant discrepancy of opinions in item 3 depicts a different story. The means of 3.66 for students and 4.13 for teachers suggest that both agree that tailor-made ESP courses should be offered to meet the needs of different departments, only that teachers are more supportive than students. To put it in a nutshell, the teachers embrace ESP instruction with the same zeal as the students, but not to the extent of substituting it for EGP.

Table 1. ESP vs. EGP (N=351 for Ss; 24 for Ts)

Queries	Responses on a Likert scale ^a							
	Subject	1	2(%)	3(%)	4(%)	5(%)	Mean	t
1. ESP should replace EGP to become the core of English teaching at vocational universities.	S ^b	6.8	15.0	48.4	20.4	9.1	3.10	2.65**
	T	12.5	45.8	20.8	16.7	4.2	2.54	
2. Compared with EGP, ESP has more specific goals.	S	2.5	6.5	39.1	43.3	8.2	3.40	0.94
	T	0	8.3	16.7	62.5	12.5	3.21	
3. Tailor-made ESP courses should be offered to students of various majors.	S	3.1	5.1	32.9	40.5	18.4	3.66	2.39*
	T	0	0	12.5	62.5	25.0	4.13	
4. ESP courses help enhance students' employment competitiveness.	S	2.0	6.5	28.9	45.0	17.0	3.69	0.99
	T	0	0	33.3	45.8	20.8	3.88	
5. ESP is more effective than EGP in improving students' learning efficacy.	S	4.5	9.6	38.0	37.4	10.5	3.40	0.94
	T	0	16.7	54.2	20.8	8.3	3.21	
6. ESP is more effective than EGP in increasing students' learning motivation.	S	4.8	12.5	42.5	33.1	6.8	3.25	1.29
	T	0	12.5	37.5	37.5	12.5	3.50	

*p<.05 **p<.01 ***p<.001

^a Responses on the Likert scale: 5=strongly agree 4=agree 3=unsure 2=disagree 1=strongly disagree^b S = students; T = teachers

4.2. Are Technological University Students Ready for ESP?

As can be seen in Table 2, neither the students nor the teachers have confidence in students' readiness for ESP instruction. The students consider themselves not competent enough to handle ESP learning, and the teachers feel exactly the same (M=3.70 and 3.71 respectively in item 5. The reasons lie in the students' lack of learning motivation, lack of adequate fundamental English ability and lack of sufficient vocabulary, about which the teachers are even more affirmative than the students ($t=2.66$, 2.22 and 2.58 in items 1-3, all reaching the significant level of p

< .05). The teachers' replies indicate that ESP is standing on a shaky ground. In fact, many ESP scholars and researchers (e.g. Chen, 2006; Gatehouse, 2001; Oladejo, 2004) have asserted that ESP must lay its foundation in general English proficiency, only through which higher level of professional and communicative competence can be achieved. If students are not able to read a simple passage or sustain an everyday conversation in English due to the lack of general vocabulary, they are likely to encounter great difficulty in understanding a content-rich journal article or express themselves in a specific occupational context. Echoing the contention of these scholars and researchers, the great majority of the teachers and the students alike in this study agree that students need to have a satisfactory grounding in basic English skills before they advance to ESP learning (item 6). As for the difficulty of ESP learning, there exist significant discrepancy of opinions between the two parties ($t=3.79$, $p<.001$). Students generally thought that "ESP is harder and more challenging than EGP", while teachers were divided in their responses. Around 42% of the teachers were indecisive, and the remaining 58% were equally divided into two opposite camps (half agreed and half disagreed). Indeed, it is not easy to decide which is harder, because ESP and EGP are equally insurmountable for most students in Taiwan.

Table 2. Whether students are ready for ESP (N=351 for Ss; 24 for Ts)

Queries	Responses on a Likert scale ^a							
	Subject	1(%)	2(%)	3(%)	4(%)	5(%)	Mean	t
1. I (Students at Fooyin) don't have any motivation to learn English.	S ^b T	3.1 0	18.4 8.3	16.1 4.2	45.0 66.7	17.3 20.8	3.55 4.00	2.66*
2. I am (Students at Fooyin are) very weak in English foundation.	S T	1.4 0	14.7 8.3	23.2 0	35.7 70.8	24.9 20.8	3.68 4.04	2.22*
3. I am (Students at Fooyin are) very weak in English vocabulary.	S T	0.6 0	10.8 4.2	18.7 0	47.3 70.8	22.7 25.0	3.81 4.17	2.58*
4. With little English vocabulary, I (Students at Fooyin) cannot learn ESP well.	S T	1.1 0	6.8 20.8	24.4 8.3	47.3 54.2	19.3 16.7	3.78 3.67	0.59
5. My (Fooyin students') English ability is not good enough to handle ESP course requirements.	S T	1.1 0	7.1 12.5	30.6 20.8	42.5 50.0	18.4 16.7	3.70 3.71	0.35
6. Students need to have a satisfactory grounding in basic English skills before they advance to ESP learning.	S T	1.1 0	5.9 16.7	22.4 16.7	47.0 45.8	23.2 20.8	3.86 3.71	0.78
7. ESP learning is harder and more challenging than EGP learning.	S T	1.7 0	3.7 29.2	32.6 41.7	42.5 25.0	18.7 4.2	3.73 3.04	3.79***

*p<.05 **p<.01 ***p<.001

^a 5=strongly agree 4=agree 3=unsure 2=disagree 1=strongly disagree^b S stands for students; T stands for teachers

4.2. What Is Required of ESP Instruction?

Table 3 reveals a consistency of opinions between the students and the teachers regarding what ESP courses should focus on and what an ideal ESP instructor should be like. Most of the subjects from the two groups (58.9% of the students and 65.0% of the teachers) agreed that ESP teaching should focus on language training while integrating terminology and discipline content into the course to meet the learners' specific needs. The majority of either group also support the statement that ESP should differ from EGP in its objectives, teaching materials, and teaching approaches. The result implies that when teaching ESP, language teachers should not use the same approach that is used in teaching general English, because these two are apparently different in their goals and learning content.

For item 3, an agreement of opinions is again found between the students and the teachers. The great majority of the respondents from both groups agree that ESP instructors should possess both English-teaching competency and subject content knowledge. However, to find instructors who are experienced and capable of teaching English may be easy, whereas it is certainly not easy to find someone who is at once a competent language teacher and a knowledgeable specialist. To solve this problem, previous research has suggested team-teaching as a coping strategy (Adams-Smith, 1980; Chang, 2005; Jackson & Price, 1981). Yet, while co-teaching may be an ideal way to deal with the shortage of qualified ESP instructors, it is not widely feasible when taking into account the cost and time spent on making co-teaching work and the difficulty of coordinating language and subject teachers. In comparison, the suggestion of seeking advice from subject specialists or obtaining subject area information from students seems to be more plausible (Dudley-Evans & St. John, 1998; Robinson, 1991). As a matter of fact, the lack of content-area knowledge is probably not an issue for most of the ESP courses, because it is general English communication ability, not subject-content knowledge, that is most desired by the learners (Chen, 2006; Oledajo, 2005; Wang, 2004).

Since communication ability is the core of learning in most ESP classes, should English be the only medium of instruction? According to the statistical figures in item 4, 25.7% of the student respondents agreed on the use of English as the only medium of instruction, while only 4.2% of the surveyed teachers did, resulting in a significant discrepancy of opinions between the two parties ($t=3.28$, $p < .001$). Apparently, many teachers (70.8%) would resort to bilingual teaching or even speak more Chinese than English in the ESP classroom. The reasons are either that most of the local English teachers in Taiwan, as claimed by Oladejo (2005), are not communicatively competent enough to teach their students in English, or that the students' English ability is too inadequate to benefit from an "English-only" instruction, as observed by the researcher of this study.

Table 3. What is required of ESP instruction (N=351 for Ss; 24 for Ts)

Queries	Responses on a Likert scale ^a							Mean	t
	Subject	1(%)	2(%)	3(%)	4(%)	5(%)			
1. The focus of ESP teaching should be placed on language training, while integrating specialized content into the course.	S ^b T	2.0 0	4.8 12.5	34.3 12.5	47.3 58.3	11.6 16.7	3.62 3.79	0.99	
2. ESP should differ from EGP in its goal, material, and approach.	S T	2.0 0	4.8 25.0	36.8 8.3	45.9 62.5	9.9 4.2	3.57 3.46	0.66	
3. ESP instructors should possess both English-teaching competency and content-specific knowledge.	S T	0.8 0	3.1 8.3	26.3 12.5	48.7 66.7	20.7 12.5	3.86 3.83	0.13	
4. English should be the only medium of instruction for ESP courses.	S T	9.6 12.5	22.1 58.3	41.9 25.0	19.5 4.2	6.2 0	2.91 2.21	3.28***	

*p<.05 **p<.01 ***p<.001

^a 5=strongly agree 4=agree 3=unsure 2=disagree 1=strongly disagree^b S stands for students; T stands for teachers

4.4. What Are the Potential Problems Facing ESP?

The same problems that have occurred in EGP will also confront ESP. To name a few, there is a large group of uninterested students with poor English foundation and scanty English vocabulary. They have no English environment to be exposed to, once out of the English classroom, nor are they required to or given the chance to use English in their daily life. English, for them, is nothing but a school subject that they have to pass in order to graduate. In addition, large class teaching and limited hours of instruction are also negative factors that will impact the teaching and learning of ESP.

Table 4 reveals the subjects' concerns about the problems with ESP. An overwhelming majority of the students and the teachers alike agree that limited hours of instruction and lack of opportunities to apply English will diminish the effects of ESP instruction, although the teachers feel much more strongly than the students in both cases ($t=4.44$ in item 1, $p<.001$; $t=2.32$ in item 2, $p<.01$). The two parties also generally agree that lack of qualified teachers is an urgent problem of ESP (item 3). When asked if ESP courses are likely to become limited to the learning of specific lexicon and the translation of content-specific texts, over half of the subjects from the

two groups (50.7% of the students and 58.3% of the teachers) gave positive responses, a result making the future of ESP rather pessimistic. In summary, unless the problems affecting the development of ESP education are addressed, little can be expected of the future of ESP.

Table 4. Potential problems of ESP courses (N=351 for Ss; 24 for Ts)

Queries	Responses on a Likert scale ^a							
	Subject	1(%)	2(%)	3(%)	4(%)	5(%)	Mean	t
1. Limited hours of instruction will weaken the effects of ESP instruction.	S ^b T	2.8 0	9.1 0	42.8 16.7	33.1 66.7	11.9 16.7	3.42 4.00	4.44***
2. Lack of opportunities to use English in daily life or the workplace will undermine the effects of ESP instruction.	S T	0.8 0	5.4 0	28.6 12.5	46.7 70.8	18.1 16.7	3.76 4.04	2.32**
3. Shortage of qualified teachers is a potential problem for ESP.	S T	6.3 16.3	19.8 38.1	33.1 30.4	24.0 10.4	16.7 4.8	3.25 2.49	3.58***
4. ESP courses will likely become limited to the learning of specific lexicon and the translation of specialized texts.	S T	2.3 4.2	5.4 8.3	41.1 29.2	39.1 45.8	11.6 12.5	3.53 3.54	0.80

*p<.05 **p<.01 ***p<.001

^a 5=strongly agree 4=agree 3=unsure 2=disagree 1=strongly disagree

^b S stands for students; T stands for teachers

4.5. What May Affect the Success of ESP Practice?

Among the various factors that are likely to affect the success of an ESP course, as displayed in Table 5, the top five for the students are: needs analysis (56.1%), students' learning capacity (51.6%), students' learning motivation (49.3%), specific course objectives and proper planning (48.7%), and appropriate teaching materials and methods (38.5%), while no other factors reached 30%. The top three factors all concern students, which correspond to ESP scholars' assertion that establishing the needs of students and subsequently the goals of a class is the foundation of any effective ESP course. This is in agreement with Chen (1994) and Hutchison & Waters (1987). Robinson (1991) also pointed out that an ESP course, in theory, is goal-oriented and is based on needs analysis.

In contrast with the students' responses, the teachers emphasized more the course itself, placing teaching materials and methods as the top concern (79.2%),

course objectives and design as the second (70.8%), and students' needs as the third (41.7%). Obviously, there is a notable difference of viewpoints between the two parties that needs to be reconciled. The result here provides the teachers with valuable information as to how their views contrast with their students', consequently allowing the teachers to make adjustments accordingly.

Table 5. Factors that may determine the success of ESP (N=351 for Ss; 24 for Ts)

Items	Ss' responses (n=351)			Ts' responses (n=24)		
	N	%	Rank	N	%	Rank
1. Survey students' needs before the class	198	56.1	1	10	41.7	3
2. Specific course objectives and proper planning	172	48.7	4	17	70.8	2
3. Appropriate teaching materials and methods	136	38.5	5	19	79.2	1
4. Appropriate number of credit hours offered	7	2.0		4	16.7	
5. Students' learning capacity	182	51.6	2	5	20.8	
6. Students' learning motivation	174	49.3	3	7	29.2	
7. Teachers' content-specific knowledge	58	16.4		3	12.5	
8. Teachers' teaching competency	67	19.0		6	25.0	
9. Teachers' English ability	28	7.9		0	0	
10. Others	4	1.1		1	4.2	

5. Conclusion

This study investigated the perceptual similarities and differences between students and teachers regarding the demand for ESP in vocational universities. Major findings indicated that both faculty and students agreed on the following: 1) ESP is important and necessary for technological students; 2) Students need to have a satisfactory grounding in basic English skills before they advance to ESP learning; 3) ESP instruction should focus on the training of language communication skills while integrating terminology and subject content into the course; 4) ESP instructors should possess both English-teaching competency and subject content knowledge, and 5) Problems that have affected the effectiveness of general English curricula will also affect ESP negatively. By way of contrast, students' and teachers' perceptions differ in these areas: 1) The majority of students agreed on the idea of substituting ESP for EGP, but it was the opposite case with the faculty; 2) Students showed stronger

support than the teachers about the idea of using English as the only medium of instruction, and 3) Students considered needs analysis, students' learning capacity, and students' learning motivation as the most crucial factors that contribute to the success of an ESP course, while the faculty regarded teaching materials and methods, course objectives and design, and student needs as the most important factors.

6. Pedagogical Implications

Based on the findings of this study and the review of literature, several implications are discussed. First, as ESP today is increasingly taught to large classes of demotivated students with a poor command of English, it seems particularly necessary to base ESP teaching on some competence in EGP, for no students of ESP could go far without basic English skills (Chen, 1994). Moreover, the complexity of the subject content must be controlled and kept within manageable limits of the learners' ability – the content knowledge should be something familiar or not too difficult for the students to handle. Otherwise, learning both language and specialized content could become overwhelming for the students who, according to the survey results of this study, were not well equipped enough to deal with the dual complicity of ESP courses. In other words, ESP teachers should select materials that are less specialized in content knowledge but still related to the learners' fields of study or work.

Second, ESP should be regarded as a complementary language-learning requirement, rather than a substitution for EGP. Many researchers (e.g. Gilmour & Marshal, 1993; Spack, 1988) pointed out that students' problems in comprehending specialized texts are mostly caused by lack of general English words, rather than by the technical terminology of their subject. This finding that general English skills are much more needed than technical English knowledge in the workplace is in agreement with previous studies (Chen, 2006; Oladejo, 2005; Wang, 2004) among in-service professionals such as nurses and engineers for communicative purposes. As Chen (2006, p.26) nicely put it, ESP is like the leaves and branches on a tree of language. "Without tree trunks and roots, leaves or branches cannot grow because they do not have the necessary underlying language support. The same is true of ESP, since content-related specific language cannot stand alone without General English syntax, lexis, and functions."

Third, ESP course planning should begin with the analysis of learners' needs and wants. Based on learners' needs and their future language use, objectives of the course can then be determined, and evaluation measurements can be integrated to ensure that these objectives are achieved. While four skills are stressed equally in an EGP class, in ESP, it is needs analysis that determines which language skills are most needed and characterize the syllabus design (Gatehouse, 2001).

Finally, an ESP teacher does not have to be an expert in the target field, but has to remain flexible and is always engaged in professional development in ESP teaching. Dudley-Evans and St. John (1998) suggested that the ESP instructor can consult with the subject expert when developing materials or encountering problems with the subject area. Anthony (2007) proposed the "teacher as student" approach, by which he meant the ESP teacher, by acting like a student of the target field, can learn a lot by listening to the views of his/her students and can also contribute to discussions by using his/her vast knowledge of English. In addition to specialist informants, self-education such as reading ESP journals, content-area textbooks, and media reports, is also an effective way to obtain specialist knowledge. Acquisition of specialist information and continuing education should thus be a priority for ESP teachers.

7. Limitations of the Study

This study is limited in several respects. First, its subjects were drawn from the same university, i.e. a private technological university in southern Taiwan, and therefore its results may not be generalized well to other educational settings or other population with different backgrounds. Future research involving a larger sample across the nation would help validate the findings of this study. Another limitation of this study concerns its methodological design - only a questionnaire survey was adopted to collect research data. Other types of survey instruments, such as individual or focus group interviews, should be included in further studies to obtain more in-depth information pertaining to the issues researched. Finally, the list of items in the questionnaire of this study is by no means adequate and complete; it is subject to further confirmation and modification through more empirical studies.

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Appendix 1. Questionnaire

Part One: Personal Information

1. Major: _____ Year of Study: _____

2. Time spent on English study per week :

- ① more than 3 hours ② 2-3 hours ③ 1-2 hours ④ less than one hour

3. Major ways of learning English (multiple choices) :

- ① classroom teaching ② self-study ③ cramming schools or tutors
 ④ English programs on the air ⑤ English songs or movies
 ⑥ English-media (newspaper, the Internet, etc.)
 ⑦ practicing English with other people ⑧ others

Part Two: Please choose from 1 (strongly disagree) to 5 (strongly agree) for each of the following statements.

1. ESP should replace EGP to become the core of English teaching at vocational universities.
2. Compared with EGP, ESP has more specific goals.
3. Tailor-made ESP courses should be offered to students of various majors.
4. ESP courses can help enhance students' employment competitiveness.
5. ESP is more effective than EGP in improving students' learning efficacy.
6. ESP is more effective than EGP in increasing students' learning motivation.
7. I don't have any motivation to learn English.
8. I am very weak in English foundation.
9. I am very weak in English vocabulary.
10. With little English vocabulary, I don't think I can learn ESP well.
11. My English ability is not good enough to handle ESP course requirements.
12. Students need to have a satisfactory grounding in basic English skills before they advance to ESP learning.
13. ESP learning is harder and more demanding than EGP learning.
14. The focus of ESP teaching should be placed on language training, while integrating specialized content into the course.
15. English should be the only medium of instruction for ESP courses.
16. ESP instructors should possess both English-teaching competency and content-specific knowledge.

17. ESP should differ from EGP in its goal, teaching material, and approach.
18. Lack of opportunities to use English in daily life or the workplace will debilitate the effects of ESP instruction.
19. ESP courses are likely to become the teaching of specific lexicon and the translation of specialized texts.
20. Limited hours of instruction may weaken the effects of ESP instruction.
21. Shortage of qualified teachers is a potential problem for ESP.

Part Three:

For an ESP course to succeed, what factors are influential? (Please choose five that you consider more important than the others)

1. Students' needs analysis
2. Specific course objectives and proper planning
3. Appropriate teaching materials and methods
4. Number of credit hours offered
5. Students' learning capacity
6. Students' learning motivation
7. Teachers' content-specific knowledge
8. Teachers' teaching competency
9. Teachers' English ability
10. Others (please specify): _____