

English for specific purposes at the turn of the 21st century

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"It is particularly appropriate that applied linguistics should be concerned with English for science and technology because it happens to bring into prominence, as 'general' English teaching does not, a question which is one of the principal issues in linguistics at the present time: that is to say the nature of language as communication".

WIDDOWSON, 1979

1. INTRODUCTION

In the last forty years Languages for Specific or Special Purposes (LSP) have experienced an extraordinary growth and impulse in its role as an applied linguistic discipline. This significant development has taken place as a result of a growth that has been felt in economy, industry, commerce, and specifically in communications. During the second half of the twentieth century scientific discoveries and technical innovations have occurred at a great speed and instantaneous communication has become an integral part of our everyday life. We are informed about everything just as it happens. We live in the 'information age'. As a result, bilingual and multilingual communication has become a significant issue in our modern society due to the speed in which all these technical advances occur. But this evolution has also been accompanied by significant changes in the communication patterns —communication satellites, TV-mobile phones, videoconferences, interactive multimedia, etc.—, in our society especially now that the special role language plays in the transmission of specialized knowledge and the creation of domain specific terminology has been widely recognized (Beaugrande, 1997:325).

All these progresseshave led to a change in the relations between people all over the world and in the way humans and machines interact thus affecting socio-cultural values and intercultural communication. A new technical-economic paradigm has arisen:

the information-technology paradigm. In this paradigm, following Castells (1996: 469) networks constitute the new social morphology of our societies and the diffusion of networking substantially modifies the operation and outcomes in the processes of production, experience, power and culture. All these processes are causing a new social structure (the networked society), a new economy (the global informational economy) and a new culture (the culture of 'real virtuality'). This trend has resulted in closer cooperation both across borders and between nations partly due to the globalisation of markets, the origins of which can be traced back to 1957, when the Treaty of Rome was signed. More recently the appearance of Internet has even blurred frontiers and has thus contributed to making McLuhan's *Global Village* a reality. This pervasive network can be considered a social advance rather than a technical one and as Crystal (2002) emphasises it has shifted now towards people and their purposes and thus the technological revolution has probably turned into a linguistic revolution.

Therefore, in this networked society a new kind of English language has appeared, though other languages and societies are also affected by the same phenomenon: New communicative situations, new culture models, new varieties of language and discourse, new cyberpragmatics (Yus, 2001) and "cybergenres" and new terminology, all based on the immediacy, interactivity, lack of formality, abundance of iconic symbols that are typical features of the language used in Internet.

The interest in subject specific communication throughout the second half of the XX century and the first years of this new century can be seen in the increased demand for special language courses in foreign languages, in new approaches to language teaching/learning, in the new status of terminology as a branch of applied linguistics, in the great amount of scientific and technical literature and the urgent need for translations, in the study of new ways of communicative scientific discourse, in the study of sociocognitive features and ideology (Van Dijk, 1998) present in scientific texts and even in the appearance of what is known as Netlinguistics (Posteguillo, 2003).

The study of languages dealing with specific fields of human activities can be seen from different perspectives and with a transdisciplinary approach. The object of study is the same, i.e., the language used in the different fields of specialized activities and professions or 'special subject languages', as Sager *et al.* (1980:38) call them, and a different viewpoint can be adopted. In teaching English as a foreign language it is possible to distinguish between English for General Purposes (EGP) and English for Special Purposes (ESP), which appears as a convenient division for designing syllabuses and course outlines that suit students' needs. Therefore, when referring to English for Specific Purposes (ESP) the focus is on the teaching of language to specialists that need it for some occupational, professional, or academic purposes, whereas when emphasizing the language as a vehicle for the transmission of specialized knowledge several terms are used: "special subject languages", *langue de spécialité*, *technolekt*. Taking this view and following Cabré (1993:139), language

can be characterized from a pragmatic perspective by the subject matter, the users and the communicative situation.

From now on this paper will focus mainly on the teaching of English for Specific Purposes (ESP) as this is the language that first applied this new approach. Some insights about the concept, types of ESP and its development will be presented as well as the situation in Spain, since its inception. A survey of the main areas of concern in ESP, the close relation between theoretical and practical aspects and the influence on materials design will be highlighted. Finally some issues on the role of the ESP teacher will be examined and some inspiring trends will be outlined that may help to open new fields of research to novice teachers to this promising field.

Nowadays, ESP covers other specialities besides science and technology, such as economics and business that have boomed in ESP in the last twelve years or so (St John, 1996, 3-18), but it is well accepted that the main research has developed in the field of science and technology. In that sense, Swales' words, (1988:xiv) "EST has set, and continues to set, the trend in theoretical discussion, in ways of analysing language and in the variety of actual teaching materials" can still be largely applied.

2. CONCEPT OF ESP

At the first stages ESP stands for 'English for Special Purposes' (Mackay 1975). The term 'special' had already been used as far back as 1964 by Halliday, McIntosh and Strevens when referring to the language varieties typical of a professional activity. The recognition of those varieties brought about in language teaching many attempts to make a deliberate choice of which variety of language is most relevant to particular groups of learners. "The so-called LSP approach (language for special purposes: for example, English for Special Purposes, English for Science and Technology, English for Academic Purposes) is in part an application of this view of language varieties" (Stern, 1983: 126).

However, as Robinson (1980:5) points out, the term 'special' suggested "special languages, i.e. restricted languages, which for many people is only a small part of ESP, whereas English for Specific Purposes focuses on the purpose of the learner and refers to the whole range of language resources". Thus, 'purpose' aims at the practical use of language the learner will need in developing occupational, professional or academic jobs.

What, then, is different in English for General Purposes (EGP) versus English for Special Purposes or English for Specific Purposes (ESP)? As Hutchinson and Waters put it (1987:53) "In theory nothing, in practice, a great deal". Is it possible, then, to establish a clear-cut difference between both? In an EGP course, language is an end in itself whereas in an ESP course language is a means to an end and this can be as multiple and diverse as the many different groups of students and activities involved. As

Widdowson (1988:3) claims “the S of ESP links language with purpose and establishes the association, but what exactly is the nature of that specificity?”

It can be stated that by stressing students’ target goals and prioritising competencies, specificity clearly distinguishes ESP and general English. Thus, needs analysis is accepted as the primary source to be considered in order to design courses aiming at specifying as closely as possible what exactly it is that students need English for. This fact has given ESP its heavy dependence on a strong research orientation that highlights the importance of target behaviours.

Nevertheless, it is not an easy task to agree on a widely acceptable definition of ESP. There have been various attempts at finding a comprehensive definition that covers all aspects and approaches suggested by different researchers. It is clear that ESP may be seen from different perspectives and has undergone different phases of development and in different countries.

In an interesting paper on specificity in reference to the teaching of English in University contexts, Hyland (2002:387) speaks about two different perspectives. According to this author, some scholars adopt what he calls a ‘wide angle perspective’ since they claim that there are insufficient variations in the grammar, functions or discourse structures of different disciplines to justify a subject-specific approach. Hutchinson and Waters (1987:18-19) state:

“ESP is *not* a matter of teaching ‘specialised varieties’ of English. ESP is *not* just a matter of Science words and grammar for Scientists, Hotel words and grammar for Hotel staff and so on. ESP is *not* different in kind from any other form of language teaching in that it should be based in the first instance on principles of effective and efficient learning”.

But then, what is ESP for them? In contrast with these *not* ideas they conclude with this statement: “ESP, then, is an approach to language teaching in which all decisions as to content and method are based on the learner’s reason for learning”. They establish different types of ESP according to the learner’s specialties: English for Business and Economics, English for Science and Technology and English for the Social Sciences. This specialization according to subject matter is the starting point and determines the language to be taught.

The second perspective Hyland (2002: 392) presents is a ‘narrow angle perspective’ on specificity. He points out that “a *specific* conception of ESP thus recognises that while generic labels such as ‘academic English’ or ‘scientific English’ may be a convenient shorthand for describing general varieties, they conceal a wealth of discursive complexity”. Academic writing conventions are not universal in that epistemological communities conceptualise their fields of knowledge differently and do not share the same strategies for writing and oral presentations. According to this ‘narrow angle perspective’, ESP “involves developing new kinds of literacy, equipping students with the communicative skills to participate in particular academic and professional cultural contexts”. Hyland considers it more realistic and desirable to establish the specific

language, skills and genres each particular group needs in order to base the learning priorities. He ends up stressing that effective language teaching in the universities should take specificity seriously.

2.1. Types of ESP

In 1975 a first attempt to classify the different types of ESP was carried out by the British Council under the auspices of the Ministry of Foreign Affairs in Great Britain. In this first taxonomy, according to their specificity and purposes, two branches were considered: firstly, *English for Academic Purposes* (EAP) that included *English for Science and Technology* (EST) and secondly, *English for Occupational Purposes* (EOP). In 1977, Strevens presented another classification which completed that previous one taking into consideration the chronological factor, i.e. whether the courses were followed as a simultaneous experience with students' jobs —sandwich courses— or students followed the courses before getting their jobs.

A further effort to find a comprehensive and more detailed classification is the English language teaching classification tree designed by Hutchinson and Waters (Figure 1). Three main branches stem from this tree: EST, EAP and EOP.

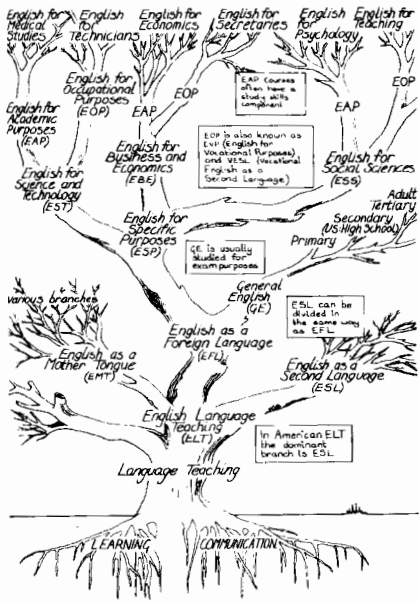


Figure 1. English language teaching classification tree (Hutchinson and Waters, 1987: 17)

Alcaraz (2000:14-15), following Widdowson, claims that any use of the language will be 'specific', so he prefers to include these branches under the more concrete name *Inglés para fines Profesionales y Académicos* (IPA) (English for Academic and Professional Purposes). Notwithstanding, IPA cannot be seen as a language with uniform characteristics even in similar fields such as health sciences and medicine or business and economy. All subject fields have some common features and some specific ones typical of that knowledge domain.

3. BRIEF HISTORICAL PERSPECTIVE ON THE ORIGINS OF ESP

The history of English for Specific Purposes (ESP) is not so new as some people might think. The first examples of this phenomenon can be found in the XIV century in a collection of everyday dialogues written for English travellers to France (Howatt 1984:3). In the sixteenth century commercial interests produced other phrasebooks and polyglot dictionaries to cope with merchants' needs of learning languages for acquiring some 'survival knowledge' for buying and selling. However, learning languages has been regarded more as a matter of prestige and pleasure for the sake of enlightenment and reading literature in their original versions than as a necessity to get a job or an activity that could contribute to the accomplishment of corporate goals. This implies a distinction between language as a 'subject' and language as a 'service'. But the nature of English for Specific Purposes, as it is now known, developed in the second half of the twentieth century.

It is difficult to establish a clear and specific date for the beginning of ESP in its modern sense. Several events contributed to the appearance and fast evolution of this new ELT approach in the early sixties. Some political, social and economic facts as well as the application of the modern linguistic theoretical trends and techniques became relevant and greatly influenced the growth of ESP.

First, it is well accepted that World War II brought about significant changes driven by the United States in economic, scientific and technical activities all over the world. Some of these activities included the movement of experts and funds to the eastern world due to the oil crises at the beginning of the 1970s. This growth showed that skilled technicians and technically oriented professionals from different countries needed to learn English. As a result there was a great enlargement of particular English language situations different from those that English teachers were familiar with and consequently they had to face the new teaching problems that started to appear.

In relation with this great development there was a need for the transmission of science and technology, which was carried out mainly in English. In this respect it is worth mentioning the UNESCO report published in 1957, which showed that two-thirds of engineering literature appeared in English but more than two-thirds of the world's professional engineers could not read English. In a global economy where reliance on

technological 'growth' and 'progress' is greater than ever the power of scientific discourse is arguably greater than ever before. This expansion of scientific and technical English gave rise to what is known as EST, English for Science and Technology, which can be taken as the building block in the continuum of ESP and, certainly, its most fruitful branch.

Swales (1988), in an interesting retrospective view of this phenomenon since the outset, claims that the starting point can be found in the publication of the article "Some measurable characteristics of Modern Scientific Prose" by C.L. Barber, in 1962, followed by Herbert and others. Other scholars, such as Robinson (1980:5) and Howatt (1984:222), indicate that ESP began in 1969 with the first conference on *Languages for Special Purposes* although both recognize that the groundwork had been done during the previous decade.

On the other hand, US leadership after the Second World War greatly influenced international relations and English started to be considered the *lingua franca* of commerce, medicine, technology and business: i.e. the language for international communication.

Apart from these socio-political aspects, some other factors influenced the fast growing and consolidation of ESP. Among these it is possible to mention the new linguistic trends and the theories on language description that viewed language as communication as well as the new studies on the interrelation of psychology and education that emphasized the importance of students' attitudes in learning, motivation and learning styles.

3.1. ESP in Spain

Although in Spain the first article on ESP did not appear until the early eighties (Monroy, 1983), teaching Languages for Specific Purposes has quite a long tradition. As far back as the XVIII and XIX centuries, French and English were studied in some Spanish military institutions, such as the *Real Colegio de Artillería*, later called *Academia de Artillería*. In 1796, when the *Real Instituto Asturiano de Mineralogía* was created, it included, among the fundamental subjects in the curriculum, two foreign languages: English and French, which were considered necessary as many foreign engineers came to the northern mines in Spain. Three years later, in 1799, Mining Engineering studies started in Riotinto and a new language, German, was included in the curriculum. At the beginning of the XIX century the Mining Act was passed and the learning of English, French, and German was highly recommended for a global and complete education of engineers. Other engineering studies, such as Civil Engineering, also took languages into consideration when preparing their syllabuses.

This concern extended to other different professions that realized the importance of international communications in trade and commerce. In the old so-called Commerce Schools students had to learn two or more languages, Arabic included, as they were expected to deal with international business. This situation has changed

completely in recent years and surprisingly the time assigned to languages and communication skills, has been cut down drastically though international relations have improved considerably.

In the eighties, when the *Ley de Reforma Universitaria (LRU, 1984)* came into force English was the foreign language mainly taught in some engineering schools and other non-philological colleges and French as well as other languages almost disappeared from the curricula. The growing importance of English was also clear in Spain due to similar factors to those mentioned above.

Among these factors, it is worth mentioning the appearance of computers as the tools for an information age that determined the preference of English as an international language. The effects of the computer could be seen in many areas of our lives: in business, government, robotics, education, science, graphics, etc. Computer documentation, applications software, operating systems and technical manuals, to mention just a few, were also written in English and represented a big obstacle to many professionals that lacked the knowledge to deal with these new tasks. Other events such as the increase in tourism and the installation of multinational firms in our country triggered the need for English courses at all levels.

All these issues speeded up the development of ESP courses in Spain in different institutions. Drawing on my experience and on previous studies by other researchers, some common points can be extracted in order to find a common ground that may be applicable to the possible learning situations in Spain. It is well accepted, however, that these features are not constantly present in all ESP courses since the variety of learners is really wide.

Among the main characteristics it is worth mentioning the following: ESP students are generally adults that need to learn the language for very specific communicative purposes, but they are not beginners. Consequently, instruction is learner-centred. This is a general issue in most Spanish institutions. Concomitant with this fact, a thorough analysis of students' needs is required to determine the selection of language contents so as to achieve the linguistic and communicative aims. Thus, needs analysis will be determinant in course design, methodology and the materials used.

Associated with this is the close relation of content and subject matter to students' disciplines, activities or occupations to train them for the possible professional settings in which they will use the language. These courses have a very specific aim either focused on the jobs to be carried out or on the academic skills to be acquired in their own field. In that sense these courses can be considered goal-oriented or task-oriented.

Another important question in ESP courses is that the time allocated to them is quite often very limited. Evidence shows that to achieve the real aims proposed, these limit constraints should be taken into account. On the other hand, ESP teaching reflects a specific methodology in that it refers to the interaction between the ESP teachers and the learners, as sometimes the teacher adopts other roles as well, as will be seen

later. In short, in an ESP course, language is a means to an end and can be as varied as the different groups of students and their needs.

Nowadays, the oft-repeated statement that university students of engineering, medicine, science, economics and other specialities should have a good knowledge of English tends to neglect other communicative skills that are necessary for them and are certainly not studied at secondary level. However, not many institutions are receptive to the inclusion of some types of communicative skills in their curricula. Thus, the mismatch between the institutions' perception of students' needs and their true needs and 'wants' often results in a lack of student motivation and the consequent disillusionment of teachers, as well as being a waste of resources (Dudley-Evans and St. John 1998: 41).

In Spain, the field of Language for Specific Purposes is a lively, productive and for some scholars, a controversial field. In Piqué and Viera's words (1997:12) ESP teachers "had to struggle through a process of recognition by administrators". Unfortunately, this situation has hardly changed and what these authors pointed out "to date some university officials question and even discard the established and successfully functioning ESP courses at Spanish university centres" is still applicable, although scholars working in this field have contributed very actively in all these years with teaching materials, papers in national and international publications, congresses, and professional meetings.

Nevertheless, some concerns about the new situation produced by the decrease in the students' enrolment in traditional philological studies as well as the increasing awareness of the need for interdisciplinary studies, have contributed to a reconsideration of some syllabuses. Consequently, a recent spate of masters, resources, workshops and other academic and professional meetings focusing on the training of ESP teachers and on the interdisciplinary approach of English for specific purposes have proliferated. In this globalized world, there is an ever-increasing need for intercultural, transdisciplinary studies and ESP has a long way to go.

The accession of Spain to the European Union, the constant arrival of immigrants in our country and some programmes funded by the European Union such as LINGUA have increased the demand to develop special language courses in the member states. This situation is a challenge for those involved in producing teaching materials, and those dedicated to research on linguistics, in particular LSP research. Currently, *Español con fines específicos* is witnessing an increasing rise in our country as well as in Europe, as shown in the first International Congress of *Español con fines específicos* organized in Amsterdam in 2001.

4. LANGUAGE ISSUES IN ESP DEVELOPMENT. FROM SENTENCE LEVEL TO TEXTUAL LEVEL

When facing course design and materials elaboration, ESP teachers make certain assumptions about the nature of language and the learning-teaching processes which

they take as the foundations on which they build up the specific course. These reference points should provide the theoretical basis, or approach, they will follow and the methodology that should be applied, taking into account the characteristics of their students and the self-access possibilities they have.

At the beginning of ESP development approaches started focusing on the vocabulary and the grammatical and syntactical features, that is, they followed the linguistic trends at that time where the sentence was the main object of study. Later the emphasis shifted to the textual features on a more communicative and pragmatic basis. Genre studies went deeper into this line of research as it involved the study of the forms of discourse that specific discourse communities accept as belonging to their own, the role these texts have in these epistemological communities, their communicative purposes and the way these are realized in texts. Different genre types have been studied and many subgenres will need further analysis. More recently, new insights in cognitive studies have provided an interesting framework to develop research on LSP and to apply the cognitive strategies that students in different subjects use to learn vocabulary and the role that metaphors play in creating technical and scientific terminology.

4.1. Register analysis

In the early sixties, the concept of 'register analysis' was introduced by Halliday, McIntosh and Stevens (1964:87) when explaining that language varies in relation to the different people who speak it and in relation to the different situations and purposes in which it is used. They suggested that the name given to a variety of a language according to use is 'register'. The aim of register analysis was to identify the grammatical and lexical features of the different specific varieties of English, such as scientific, professional or academic English. The regular and consistent appearance of these lexical and grammatical features in this type of texts contributes to giving them a kind of unity, recognizable by the epistemological community.

The first register studies followed a lexicostatistics and structuralist approach and were basically of a quantitative nature (Barber, 1962) and contributed to the design of specific syllabuses that considered the features of those varieties. Some good examples of such a syllabus were Herbert's *The Structure of Technical English* (1965) and Ewer and Latorre's *A Course in Basic Scientific English* (1969). The former focused on a functional notional approach based on lexis and syntax which were selected on an intuitive basis, whereas the latter followed a structuralist approach and was based on research into scientific texts from which some items were selected according to their frequency and some systematic drills design. These first works, though centered on the sentence level and the formal aspects of language, represented an important

contribution to the consideration of ESP status as a new trend to be taken into account in the Applied Linguistics world and offered a sound basis for prioritising teaching items in specialized scientific contexts.

But register analysis as a research procedure was soon overtaken by new approaches in the world of linguistics. Some of the criticisms made of the register analysis approach took into consideration that it merely described the indexical features in which a language system is manifested but it did not face how the language system is realized as a communicative activity and it did not provide adequate insights into how information is structured in a particular variety.

Nowadays, studies on register are undergoing a bit of a revival as a result of the fact that computer-based corpora techniques make it easier to contrast frequency analysis, thus allowing a more consistent corpus-based study. Corpus-based studies represent the convergence of language teaching and language research. As Sánchez (2000: 6) explains, corpora might be useful to select the lexical items to be taught or to illustrate the linguistic patterns or the linguistic usage and they offer an excellent basis for creating authentic exercises with a contextual use of vocabulary. Some authors consider that corpus linguistics is a methodology rather than an aspect of language requiring explanation or description (McEnery and Wilson 1996/2000:2). However, Corpus Linguistics has to be taken as an important resource for studying different linguistic aspects and for teaching conceptualised linguistic items. A complete overview of this field is also dealt with in this volume.

4.2. Discourse studies

In the first stages of ESP development the focus had been on language at the sentence level, whereas in the second phase attention was shifted to the level above the sentence, to see how sentences were combined to form paragraphs and whole texts or 'discourses', and how these combinations realized the writer's purpose. The pioneering work in this emerging field of discourse or rhetorical analysis was done by the so-called Washington School of J. Lackstrom, L. Selinker, L. Trimble and M. Todd-Trimble in the United States and H.G. Widdowson in Britain.

The main concerns of this stage is how the choice of certain linguistic features, namely, tense and articles, affects the kind of statement made in each case and how these sentences are combined in discourse to produce meaning, i.e. the form of the text depends on the function it has. Thus, studies about the use of the passive, certain modal verbs, and the third person are used to describe the textualization in English of scientific discourse. For example, in a scientific report it is common to find a considerable use of the third person, past tenses, multi-noun compounds and passives. They claimed that whereas in GE tense choices are dependent on the notion of time,

for instance, the present tense, in EST they are usually dependent on the degree of generality. The research aims of this trend are to identify the organizational patterns in texts and to determine the linguistic realizations by which these patterns are signalled. These patterns would then form the syllabus of the ESP course.

Trimble, basing his approach on real texts and taking the scientific discourse as a means to transmit information, provided the Rhetorical Process Chart in his work *EST: A Discourse Approach* (1985), where he expresses that it is necessary to know the EST rhetoric as it is the process a writer uses to produce a desired piece of text and the way in which information is organized to produce an EST text. He also distinguishes two main types of paragraphs: the **conceptual paragraph** and the **physical paragraph**. The former, which refers to the broadest generalization in the informative content – the core – and that may be realized in a group of sentences or even a single one. These groups of sentences form the **physical paragraph** where the specific information and the lesser generalizations are supported. Another strength of Trimble's work in the study of EST texts is the distinction he makes between *rhetoric* as an important part of the broad communicative mode called *discourse*. The rhetorical process operates with specific rhetoric techniques and functions. By applying the rhetorical techniques, we organise and bind the items of information in a piece of EST discourse according to some kind of natural order: time, space, causality and result or some kind of logical relations, such as importance, comparison, analogy, contrast, exemplification and illustration. As for the rhetorical functions that are the heart of the rhetorical process, he distinguishes five general types: description, definition, classification, instructions, and visual-verbal relationships. This comprehensive approach to EST text organization has been very enlightening and related very closely to the latest theories on rhetorical structure (Mann and Thomson, 1986, 1988) and has proved to be very valuable in some computer applications developed in the natural language generation field (cf. Bañón 1999, for an example of this application).

Trimble's interesting attempt was further enriched by Widdowson's arguments on the primacy of language *use* over *usage*, or form, and the communicative aspect of language that became extremely influential in ESP. The teaching materials based on the discourse approach helped students to recognise textual patterns and discourse markers. The emphasis was on key functions in scientific and academic writing: definition, classification, description and hypothesising and on the linguistic forms of cohesion. The *English in Focus* series by Allen and Widdowson (1974/1980, nine volumes) is a good example of this approach. However, these books, though influential from a theoretical viewpoint, did not have a great commercial success due perhaps to the rigidity of the format and its overemphasis on the homogeneity of discourse.

Widdowson's ideas were also present in *The Nucleus Series* (Bates and Dudley-Evans) that started in 1976. This series concentrated on the rhetorical function of description, applied the functional-notional syllabus by introducing vocabulary related to 11 key concepts or notions of science and focused on Trimble's level D, the

description of structure. On the whole, it was more successful than *English in Focus* as it had an attractive layout, good visual support, and was specifically designed for students with a low level of language. However, their detractors considered its main drawbacks to be that this series neglected the communicative value of scientific texts and the development of specific study skills.

Some of the later works, though placed in the register of science, started to shift attention to specific scientific genres (Tarone *et al.*, 1981, Alvarez de Mon, 2000, 2001, among others). Halliday's functions of language use also shed some light on the need of taking into account for teaching purposes not only the **ideational function** (i.e. use of referential language to express content) but also the **interpersonal function**, as the use of language to maintain social relations, and the **textual function** to create situational relevant discourse.

4.3. Genre studies

The desire to go deeper into the study of more detailed descriptions of language varieties, in the type of texts students use, the communicative purpose writers have and how these texts are organised within subject-specific, socio-cultural and professional settings led to the fruitful trend of Genre studies, as a part of the pragmatics approach, increasingly important in ESP work. This new approach develops from register analysis but it means an improvement as it does not simply study what linguistic forms are present in the texts but how they realize the conceptual and rhetorical structures, modes of thought and communication which are conventional for certain discourse communities. In Dudley-Evans and St. John's words, (1998:9) "genre analysis does not represent a new approach to ESP and it is rather the next step on from needs analysis that will provide the linguistic data needed for the preparation of teaching materials". But genre studies have also provided a model rich in socio-cultural, institutional and organizational explanation, relevant and useful to language teachers and applied linguists (Bhatia, 1993:11) as they lay emphasis on the combination of essential grammatical insights and adequate socio-cognitive and cultural explanation of different scientific texts (Swales, 1990, Bathia, 1993). This approach is closely related to a pragmatic view of the language.

According to Swales (1990), genre is a recognizable communicative event characterized by a set of communicative purposes identified and mutually understood by the members of the professional or academic community in which it regularly occurs. There are some constraints that may be considered in terms of their content, positioning and form and audience expectations. These constraints are used to achieve private intentions within the framework of socially recognized purposes.

Bathia (1993) elaborates on this definition adding some interesting nuances in the psychological, cognitive level of genre construction. He gives greater importance to

tactical aspects that play a significant role in the concept of genre as a dynamic social process. Genre, after all, is a socio-culturally dependent communicative event and is judged effective to the extent that it can ensure pragmatic success in the business or other professional context in which it is used. Berkenkotter and Huckin (1995:4) highlight that “genre knowledge is a form of ‘situated cognition’ that continues to develop as we participate in the activities of the ambient culture”.

Therefore, as there is a close relationship between language and culture, those models proposed in different genres by the native English speakers are Anglo-American in their macrostructure (Salager Meyer, 2002), having affected the scientific writing of those non-native scholars (Spaniards, for instance) that have to publish their papers in English. Thus, these Anglo-American models have started to be applied in different discourse communities as well as in different knowledge communities if they want to get recognition and acceptance from their colleagues in English-speaking communities. Some genres, such as research articles, also present some adaptation to English models (Salager Meyer, 1998). In this genre, footnotes or endnotes were typical of social studies whereas they were very rarely used in some “hard science” disciplines. Nowadays, they are also less used in the field of linguistics or other social sciences. Another clear example of this is the structure of professional CVs written in Spanish forty years ago and those written now by recent graduates. Not only the structure (more synthetic now) but also the amount of information and the sequential order (from the new events to the oldest) of this information (theme-rheme) have changed. This phenomenon can be observed, as Salager-Meyer points out, in a process of “aculturation” which should be taken into account if we try to find some balance between the advantages of publishing in English and the advisability of preserving the discorsal features belonging to a certain culture.

All in all, genre studies have opened an interesting line of research in Spain since they have been taken as the basis for teaching technical writing in different institutions and to different epistemological communities (Duque, 2000; Fortanet *et al.*, 2002). However, some orientation from specialists on different subject matters may be necessary for cross-fertilization as different genres require different strategies and communicative goals and are reflected in different cognitive structures. Linguistic issues cannot be dealt with in the same way as an experiment carried out in biology, chemistry or in medicine. To this effect, interdisciplinarity should be one of the main points to consider by ESP teachers when facing the tasks students should perform in relation to other knowledge and discourse communities.

5. COGNITIVE LINGUISTICS AND LSP

This new linguistic approach appeared in the 1980s and at the outset it was essentially based on empirical principles though some of the theoretical postulates of

traditional disciplines, such as psychology and anthropological studies, contributed to its rise. The term 'cognitive' was used by generative linguists as opposed to the American structuralism as they understood that the faculty of language enters crucially into every aspect of human life, thought, and interaction. Generative linguists claim that language is a separate modular system independent of the rest of cognition. As a reaction towards these views, Lakoff adopted a more experiential perspective in syntactical semantics, which incorporated pragmatic concepts related to the philosophy of language, i.e., speech acts, performative verbs, presuppositions, implications, etc. However, as Langacker (1987:4) states, "cognitive grammar is not in any significant sense an outgrowth of generative semantics, but it does share with that conception a concern for dealing explicitly with meaning and for providing a unified account of grammar and lexicon".

The first steps towards this new paradigm can be found in Lakoff's *Women, Fire and Dangerous Things* (1987) and Langacker's *Foundations of Cognitive Grammar* (1987) though some previous work had been done by Johnson and Lakoff in the seminal work *Metaphors We Live By* (1980) and by other authors (cf. Langacker 1987: 3-4). In this book, these authors focused on a systematic description of the nature and use of metaphor, deeming that metaphor is not a matter of language alone. It goes beyond the language level by considering an extra dimension: the non-propositional image-schematic dimension.

Within the cognitive linguistics framework there are two main models. In the first, the more philosophical one, **objectivism** or objectivist cognition, the symbols and algorithmic operations of symbol-manipulation are seen as constituting a language of thought. These symbols function as internal representations of external reality and the rules that manipulate the symbols do not make use of what the symbols mean. The second one adopted by Lakoff and Johnson has come to be known as **experientialism**, in which they integrate the categories set up by any human language with those set up by our general cognitive faculties in a specific socio-cultural environment. This approach seeks the correspondences between conceptual thinking, body experience and linguistic structure while trying to find out which the real contents of human cognition are¹.

As a working definition of what cognitive linguistics is we can bring Ungerer and Schmid's (1996:X) for a better understanding, "cognitive linguistics is an approach to

¹Another different procedure coming from a seemingly distant field such as computer science provided new ways of thinking about the mind. The operation of digital computers became the dominant metaphor for understanding human mentality: minds were likened to programs that run on a particular sort of biological computers called brains. Such notions gave rise to a new philosophy of mind, called **functionalism**, in which minds were defined by their functional rather than physical or experiential properties.

language that is based on our experience of the world and the way we perceive and conceptualise it". The cognitive theory can be seen more as a functional model than a formal model in that, in the category-function dichotomy, the latter prevails over the former. Moreover, it is based more on empirical data as the main source of study than on a philosophical basis. However, this does not imply that cognitivism neglects the form since meaning is realized through these forms.

Thus, some of the most appealing key points in cognitive linguistics are: prototype theory, idealised cognitive models (ICMs), cognitive domains, metaphorical models, categorization of the real world, naming or lexicalization, colloquial expressions and frames and scripts. These last, frames and scripts, originally developed in the field of artificial intelligence. The role of metaphoric and metonymic mappings as cognitive mechanisms which yield sets of explicatures is clearly analysed in Ruiz de Mendoza (1999).

All these facts sparked off an interest in studying metaphors in general and scientific metaphors in particular, in three more rigorous and systematic ways: metaphor is the creation of language, metaphor is the explanation of ideas and metaphor is the representation of scientific news. As Ungerer and Schmidt (1996:47) claim, quoting Boyd and others, metaphors are omnipresent in science and this is specially true in computer science where most of them have been introduced for explanatory purposes and come from ordinary language use in daily life: e.g. family: motherboard, father file, grandfather file, son file; language: statement, order, instruction, syntax, etc (cf. Aguado, 1994, for more examples of the computer field though not from a cognitive perspective).

Many of these research lines were examined for practical applications and have served to make inroads in other disciplines in the field of applied linguistics, such as ESP (cf. among others, Littlemore, 2002, Roldán, 1999, White, 1998) and terminology (Temmerman, 2000).

Yet, cognitive linguistics, according to Ungerer and Schmidt (1996:267), has given a new significance to vocabulary and grammar, linguistic items that had been overshadowed by the communicative and pragmatic approaches. Prototype theory can be used in grammar in two ways. Firstly, there are categories of grammatical constructions centred around prototypical members. Secondly, there are general principles of grammar that, among other things, show how form depends on meaning. Such principles apply in prototypical cases. These two uses of prototype theory in grammar interact in such a way as to provide both descriptions and explanations for a wide range of phenomena that have previously resisted description, let alone explanation.

On the other hand, terminology has not escaped the influence of cognitive models. An interesting application of the cognitive theory to terminology is given by Temmerman (2000). She bases her sociocognitive model of terminology on five principles: units of understanding, understanding as a way of sorting cognitive models,

template representation, functionality of synonymy and polysemy and the contention that cognitive models are constantly in transition.

6. METHODOLOGICAL ASPECTS IN ESP

In spite of its relatively brief existence, ESP has undergone a number of major shifts in orientation largely due to the fact that it has been the field test for each new theory or approach to language and language learning. New technologies (videoconference, audio conference, internet, e-mail, chats, etc.) have also contributed to incorporating a new methodology into the classroom and the teacher has to adopt a new role. For this reason I will review some of the main approaches, highlighting in which way they influence the learning/teaching process.

6.1. Needs Analysis

It has been already mentioned that the purpose of an ESP course is to enable learners to perform adequately in a target situation. Thus, the ESP course design process should start by identifying the target situation and then carrying out a detailed analysis of the linguistic features of that situation. Although the study of needs analysis should be common to all types of language teaching, it gave ESP a kind of scientific basis by relating language analysis and the students' reasons for learning and became the cornerstone of any ESP course. However, the concept of need is somehow *fuzzy* and there are different kinds of needs depending on the perspective adopted and thus, the approach to teaching will vary accordingly.

The *Communication Needs Processor* presented in Munby's work *Communicative Syllabus Design* (1978) provided a highly detailed set of procedures for discovering target situation needs. The profile of the learner's needs covered communication purposes and communicative settings as well as language skills, functions, structures, etc. Munby's aim was to determine language contents according to the language needs a student will have as a user of the language after finishing the course and the parameters involved in achieving communicative skills. Although Munby's study marked a watershed in the development of ESP, it proved insufficient, as it did not consider other institutional, psychopedagogic and methodological factors.

A wider approach to needs analysis can be found in Hutchinson and Waters (1987:54). They make a distinction between **target needs**, i.e. what the learner needs to do in the target situation and **learning needs**, i.e. what the learner needs to know to perform in the target situation. Target situation needs are concerned with language use but we also need to know about language learning, we need to know how people

learn to do what they do with language. Both kinds of needs are summarized in Table 2

Target needs	Learning needs
Why is the language needed? For studying, for working, for training, etc	Why are the learners taking this course? Compulsory, optional, attitude, etc
How will the language be used? Medium, channel, types of text, etc.	How do the learners learn? Learning background, methodology, techniques, etc.
What will the content areas be? Subjects, level, etc.	What resources are available? Number of teachers, attitudes, teacher's knowledge of subject matter, materials, aids
Who will the learner use the language with? Native/NN speakers, level of knowledge of receiver, relationship, etc.	Who are the learners? Age, sex, interests, social background, knowledge of subject matter, attitudes to English
Where will the language be used: physical setting, human context, linguistic context	Where will the ESP course take place?
When will the language be used	When will the ESP course take place

Table 2

More recently a third kind of need has been added, the **Present Situation Analysis**, from which it is possible to establish learners' lacks (Dudley-Evans and St John 1998:124). This analysis estimates strengths and weaknesses in language, skills and learning experiences.

All these forms of needs analysis as well as **means analysis** should be seen as complementary rather than as alternatives. A thorough, realistic study of needs analysis will help the novice ESP teacher to tackle the difficulties he is usually confronted with in the new teaching environment.

6.2. Course design

Once it has been carefully determined what students needs are, it is necessary to face the design of the course. There is certainly no single model for an ESP course. As already pointed out, there is a close relation between needs analysis and what students are expected to learn or to do by the end of the course and this will determine the materials used and the tasks to be carried out in the classroom.

As Alcaraz (2000:194) suggests, focusing on the students' communicative needs requires that the basic aspects should be: the formal and functional components present

in language, the four language skills needed in communication, and the most important one, genre, in which all the other characteristics can be embodied within a scientific discourse community. In the professional and academic world we interact by means of both oral texts (interviews, lectures, everyday conversation) and written ones (letters, e-mails, reports, papers, contracts, etc). All these texts can be classified from the genre point of view but at the same time constitute different kinds of discourse.

On the other hand, it is important to take into account which item will be selected and in which order it will be presented to the classroom as both aspects are relevant for the course being designed.

Course design implies considering the following aspects that can serve to promote students' awareness of the linguistic system underlying a specific genre and understand the cognitive structure of certain texts of a discipline:

- Lexical and syntactical points: subject-specific terminology, subtechnical vocabulary, synonyms and antonyms, clippings and acronyms, nominal groups, or nominal expressions, nominalization, metaphorical use of words, iconic language, active versus passive use, modality, usual presence of verb tenses, syntactic relationships: paratactic and hypotactic and logical-semantic relations: expansion and projection, (Halliday 1985), etc.

- Discoursal features: coherence and cohesion, intentionality, topicality, theme-rheme, thematic progression, hedgings, discursive organization, persuasive devices, etc.

- Genre and sociocognitive features, macrostructure in different types of genres and subgenres, plus moves that may appear, depending on the type of genre: CARS, IMRAD, situation, problem, solution, evaluation, etc.

To sum up, needs analysis, syllabus design, materials production, task specification and evaluation have to be considered within an environment, as part of a living and growing context.

6.3. The role of the ESP teacher

In many ways, ESP teachers obviously have much in common with any language teacher: they have to take into account developments in language learning and teaching, new currents in language analysis, be familiar with the new technologies as pedagogical aids, etc. Generally speaking, the great majority of ESP teachers have not been trained as such and they are likely to find themselves as 'outsiders' in a strange land when they face the possibility of having to teach in an ESP environment. What distinguishes ESP teachers from many EGP teachers is the need to approach the new realms of knowledge with an open-minded flexible attitude, willing to take an interest in the students' disciplines and understand the requirements of other professionals, be they in the academic or occupational field. In this sense, ESP work involves much more

than merely teaching. For that reason, many researchers prefer the term 'practitioner'. Dudley Evans and St. John (1998:13) see the ESP practitioner as having five key roles: a) as teacher, b) as course designer and materials provider, c) as researcher, d) as collaborator, and e) as evaluator.

Here, I will deal with the first four since they will be most illustrative for future ESP teachers in Spain and I will add as the fifth, the ESP teacher as technology user, since frequently ESP teachers are in the environment most appropriate for the use of new technologies. Other activities such as external evaluators of materials or courses given in different institutions are not normally entrusted to teachers in Spanish institutions. Nonetheless, ESP teachers have to evaluate the results of their own courses. Some different methods could help to achieve a comprehensive overview: on going needs analysis, students surveys at the end of the course, evaluation through discussion with former students. All of these possibilities will result in a better syllabus adaptation for the following year.

Now, I will go on to consider the first four roles that can be very enlightening for novice teachers.

a) As **teacher**. It seems quite understandable that it is difficult to handle the new subject matter of which ESP teachers have no experience at all and this fact makes them feel insecure. However, drawing on my experience, this is not such an important problem as might appear. It may even be a good way of communicating with students, eliciting responses from them on specific topics. This could not be easily done in their first year at the university, for instance, but it may be applicable if students take English in later years. If there is a high level of specialization, it is advisable to ask help from teachers in other disciplines and try to collaborate with them in interdisciplinary projects. This is an interesting way of approaching a new field of knowledge as engineers and business students, among others, need to improve their writing and oral skills and very often they require advice from ESP teachers, either for preparing a job interview or applying for a grant, etc.

b) As **course designer and materials provider**. It is rarely possible to find a published textbook entirely suitable for the students' needs, as sometimes the contents are acceptable but the tasks are meant for younger students, or rather, the tasks are well organized but the contents do not meet the students' needs. Moreover, the wide range of ESP courses and the great variety of different situations, be they academic, professional or occupational, make the problem worse. So ESP teachers have to either adapt materials or even write their own.

One of the key issues in materials and course design has been the concept of authenticity, inspired by the theoretical explorations of the communicative purpose of language. According to this view, Widdowson (1979:165-166) claims that authenticity does not lie in the materials themselves but in the response of the reader/hearer to the writer's intention. In other words, an ESP authentic text will be valuable in the classroom

as long as there is a good understanding of the purpose of the text producer on the part of the reader/student based on a shared knowledge of conventions. To achieve this goal, materials brought into the classroom should correspond to those normally used in the student's own specialist workplace or study situations. Robinson (1991:54) considers it necessary to see whether the goals that the ESP teacher establishes are authentic to the learners' real world roles and whether the tasks or activities that take place in the learning situation are authentic. A different solution is proposed by Bhatia (1993:146) when he speaks of 'easification' as an attempt to make the text more accessible to the learner by using a variety of 'easification' devices but without making any drastic changes to the text, thus maintaining its generic integrity.

c)As **researcher**. It is wise for ESP teachers to carry out research on specific texts in the subject they are dealing with in order to understand the discourse of the texts that students have to study or use as professionals and the situation in which they are produced. They also need some insights into the educational and professional environments for which the students are learning. It also seems advisable to keep a close relation between ESP teaching and ESP research aiming at achieving some fruitful and coherent results since students and other colleagues will benefit from this teaching-research interaction. Fortunately, ESP teachers in Spain became aware of this situation from the beginning and an exhaustive enumeration of either scholars or their writings is beyond the scope of this article. Suffice it to say that the number of doctoral theses, articles, papers, workshops, and congresses has greatly increased in the last fifteen years and good examples may be found in the organization of congresses in this field, such as AESLA, AELFE, as well as in other professional meetings held in different universities: U. de Extremadura, U. Alcalá de Henares, U. Jaime I, etc. (cf. Aguado y Durán 2001, for a more detailed account).

d)As **collaborator**. It has already been mentioned that subject specific work is best approached through collaboration with specialists. In fact, subject specialists do not generally know what ESP teachers work amounts to and in many cases the idea they have of English teachers goes back to their own experiences in learning English at school and the role EGP teachers played. As nobody appreciates what is really unknown, it is advisable to start cooperating with them for a better understanding on both sides. The closer this collaboration is, the better knowledge the ESP teacher will have about the present and future sociolinguistic situations their students will be immersed in and the higher consideration they will deserve from their colleagues. Interdisciplinarity can be targeted in several different ways. Dudley-Evans and St. John (1998:42-44) suggest three different levels: cooperation, collaboration and team-teaching. No matter which level is followed, from my own experience any of them is a good starting point to highlight the importance of cross-fertilization among different disciplines, and to give the ESP teacher the chance to approach the new field of knowledge and discourse community. On the other hand, very often professionals or

teachers from other disciplines have to travel abroad and make oral presentations in English or cope with some business affairs for the firm they work for and they usually ask ESP teachers about some sociocultural features of the people in the country they intend to visit. Thus, culture studies seem to have aroused renewed interest and emphasis on ESP and sociocultural studies are of the utmost importance and a promising research line to follow (cf. Brislin and Pedersen 1976, McGinity 2001, Samovar and Porter 2000, among others).

e) **As technology user.** Although the use of computers in the process of language teaching, learning and testing started about twenty years ago with the so-called CALL applications, the growth it has experienced as an area of applied linguistics has exceeded all expectations. The number of books and articles on this topic has increased considerably. As mentioned in the introduction, at the beginning of the XXI century, everyday language use is so tied to technology that learning through technology has become a fact of life and has greatly influenced second language acquisition. Nowadays, the expansion of the World Wide Web has put CALL programs aside and they have been replaced by what is known as network-based language teaching (NBLT). The Internet does not constitute a particular teaching method but it is an important new medium that brings together millions of people throughout the world. Then, as a new medium of communication we cannot ignore its existence nor its potential to support colloquial or academic study and the possibilities offered to learners, as they can be provided with strategies to exploit these resources critically. But as Warschauser (2000:41) comments, up to now much of the literature published on these topics consists of anecdotal teacher reports and so there is a need for systematic studies. Language learning is a complex social and cultural phenomenon, even more so when it involves new technologies that connect the classroom to the world.

Therefore, it is within this multidisciplinary approach and in connection with the role that the teacher plays in bringing these new technologies into the classroom that this point is presented in this paper, but taking into account that new technologies are not exclusive to any ESP teaching environment. However, any novice ESP teacher that wants to make use of the Internet needs to master these technological advances in order to make the most of them. Undoubtedly, on-line communication is a good way of improving students' motivation and a chance to communicate in English in a real situation (cf. Palmer 1999:39-54). Courses-based on Internet resources offer a wide variety of materials for language learners but most of these courses are not graded in terms of difficulty, they tend to be composed of a set of practical activities to encourage students to learn independently and they promote learner autonomy (cf. Fidelman 1996, Kent 1997, Orri 1998, among others). They also offer the opportunity to choose materials suited to their level of English and to their learning style. Conversely, Web-based course design is time-consuming if the teacher is not a specialist. For this reason the preparation of any web-based course should be done in a team, with some experts

that can update the software applications. In any case it is very difficult in the XXI century not to follow the technological trend to keep pace of the times.

ACTIVITIES

The purpose of the activities proposed is to raise the readers' awareness of some of the issues dealt with in this chapter. These activities can be done in pairs or small groups.

1. ESP is a field full of acronyms. What do the following acronyms stand for:
LSP, EGP, EST, EAP, EOP, IPA, EFL, ESL?
Which acronym would correspond to each of the following courses?
–A course for writing business letters for secretaries
–A course on giving oral presentations for engineers
–A course on how to write a research article
–A course on reading skills for students of computer science
2. Think of a specific group of learners and state the common purpose they share and the communicative skills that should be emphasized.
3. Some authors think every time you teach a new group of students there is a specific purpose. ESP as a special approach to teaching does not exist as such. Comment on this.
4. ESP has been influenced by the main trends in linguistics research. Can you give the name of a book for each of these trends: register analysis, discourse analysis, genre studies, and cognitive linguistics? Indicate the author and year of publication.
5. As early as 1979 Mackay and Mountford edited an interesting volume on ESP. In chapter 2, Mackay dealt with learners' needs and presented a detailed questionnaire. Taking into account the information provided by Dudley-Evans and St John (1998), in chapter 7, concerning needs analysis, give your opinion on Mackay's ideas and the questionnaire presented.
6. Think of yourself as an ESP teacher, in which of the roles would you feel more comfortable? Explain why.
7. For which of these roles does the ESP teacher need specific training? Suggest different possibilities in case you consider it necessary.

8. Discuss the "wide angle perspective" and the "narrow angle perspective" on ESP, pointing out what you consider the advantages and disadvantages.
9. Go to your library and borrow a book that presents an ESP course and decide which audience it is addressed to, which the learning objectives are, which level of language it has and which level of technical knowledge the students are expected to have.

ANNOTATED BIBLIOGRAPHY

ALCARAZ VARÓ, E. (2000) *El inglés profesional y académico*. Madrid: Alianza Editorial.

The reading of this book is compulsory for those interested in the field of languages for specific purposes. It covers all the aspects related to this field in the clear and organized style that is characteristic of Dr Alcaraz. The book summarizes the main language issues of interest to the ESP teacher providing him with a comprehensive, sound linguistic framework. Complex linguistic concepts such as nominalization, ergative verbs, hedgings, topic, theme and rheme, among others, are clearly explained. The author also deals with genre (Ch. 6), politeness (Ch. 7) and the methodological aspects involved in the process of teaching an LSP course (Ch.8). The reader can find a good number of examples from different subject fields: science and technology, medicine, business and law (Ch. 6). This book has added new insights to the study of ESP in Spain giving it a new name: Professional and Academic English: *Inglés profesional y académico*, IPA.

GARCÍA MAYO, P. (2000) *English for Specific Purposes: Discourse analysis and discourse design*. Servicio Editorial de la Universidad del País Vasco.

The main assets of this book are the detailed syllabus and the updated bibliography it presents. This syllabus corresponds to what could be a course for undergraduate or graduate students of philology who want to know this field in depth and its related aspects, or for teachers that have to face teaching in an ESP environment.

HUTCHINSON, T. and A. WATERS (1987) *English for Specific Purposes: A learning-centred approach*. Cambridge: Cambridge University Press.

This book is a comprehensive, organized review of what ESP is and its application in the classroom. It is divided into four sections, starting from the definition and clarification of the ESP approach (Section 1). In section 2, the authors cover all the aspects of interest to the design of a course, such as language description, theories of learning and needs analysis. Section 3 is concerned with the practical applications of course design: syllabus, materials, methodology and evaluation. Finally, section 4 is devoted to the role of the ESP teacher. At the end of each chapter the authors provide the reader with some helpful tasks that put into practice the theoretical aspects explained.

ROBINSON, P. (1991) *ESP Today: A practitioner's guide*. Hemel Hempstead: Prentice Hall.

This book has been chosen because the bibliography it includes was the most comprehensive and exhaustive one when it was published (813 items). The bibliography is classified according to the

different issues related to ESP. First, those books, journals and articles that deal with ESP in general, and then the following sections are distinguished: needs analysis, the analysis of language for ESP, syllabus and course design, methodology, materials, evaluation and testing, the role of the ESP teacher, business English and finally English for Academic Purposes. Not surprisingly these, and in this order, are also the topics covered in this book.

SWALES, J. (1985/1988) *Episodes in ESP*. Hemel Hempstead: Prentice Hall International.

To someone interested in the development of ESP this book is a must. The book selects the main contributions to ESP although, as the author claims, they deal mainly with science and technology. The chronological period covered goes from 1962 to 1981. These contributions are varied in their nature and it is possible to find research papers on specific EST language features such as Episode 1, (Barber, 1962) and Episode 15, (Tarone *et al.* 1981), books to be used in the classroom such as Episode 2 (Herbert 1965) and Episode 4 (Swales 1971) and articles dealing with different methodological issues, such as Episode 7 (Allen and Widdowson 1974) and Episode 14 (Hutchinson and Waters 1980).

SWALES, J. (1990) *Genre analysis. English in Academic and Research Settings* Cambridge: Cambridge University Press.

This book is a key contribution to the analysis of the language of EST. It introduces the concepts of genre, which henceforth stands as the buzzword in language research. Although he starts by focusing on the research article in general as an example of a written genre he concludes that the specific features of this genre are closely related to the interest, cognition frames and ideology of the discourse community that this genre belongs to. He applies the notions of movement and discovers four key sections in the research article: introduction, method, research and discussion. This IMRD perspective has opened a fruitful line of continuing research among ESP practitioners.

TRIMBLE, L. (1985) *English for Science and Technology*, Cambridge: Cambridge University Press.

This book can be considered the forefather of Swales' approach since the author claims that the rhetoric of EST discourse is the building block for the teaching of EST. As Trimble mentions in the introduction, rhetoric is the process a writer uses to produce a desired piece of text and this process is basically one of choosing and organizing information for a specific set of purposes and readers. The book is based on research and teacher-oriented. In Chapter 3, the author introduces the basic rhetorical concepts. In Chapter 4, he presents the application of his approach in the classroom. In Chapter 5, the paragraph is introduced as the unit of interest. The following chapters 6, 7 and 8 deal with the rhetorical techniques, the rhetorical functions and the rhetorical grammatical relationships. Chapter 9 studies some lexical problems in EST discourse and finally, in chapter 10, the author provides some tips on how to apply his approach in the classroom.