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# It is well known today—though not always so well accepted—that English is taking over as the language of science and technology. One cannot become part of the scientific community without a fairly good command of both its spoken and written forms. But learning a foreign language is not like memorizing the periodic table of the elements the night before an exam. Personal motivation is a prime factor in effective language learning, but there are also others. In tertiary education, effective learning is only too often influenced by subtle external factors such as subject ranking, syllabus content and teacher status.

# Subject ranking

In Spain, as in many other countries, until very recently foreign language teaching/learning has basically been an activity associated with secondary education, specialized language schools or faculties of philology. Unfortunately, in tertiary education where the mastery of foreign languages—especially English—is becoming a necessity and no longer a luxury, formal instruction stops. With little time to waste learning the social functions of a language, a few university science faculties are beginning to offer their students courses in English for Specific Purposes.

English for Specific Purposes (ESP), the type of instruction associated with tertiary education, as opposed to English for General Purposes (EGP), the type of instruction associated with secondary education, is a relatively recent development. The great demand for 'service'-English courses in technical colleges and polytechnic universities, particularly in the areas of the physical and mechanical engineering sciences in Latin America—mainly Chile and Brazil—Asia and the Middle East, led to interesting developments in special purpose

# Foreign languages in tertiary education. An assessment

language teaching. During the decade of the 1980s, ESP became recognized as a discipline in its own right under the umbrella of Applied Linguistics.

Today, at least in Spain and Latin America, it is at the polytechnics and the three-year-degree professional schools ("Escuelas Universitarias") where we find a greater number of practitioners employed, courses offered and research being done. The situation at the Madrid Polytechnic, for instance, compared with that of the science divisions at the University of Barcelona, is a good example. Madrid has a teaching staff of 65 full-time ESP teachers (17,000 students), while Barcelona has only one part-time teacher (18,000 students). This is a generalized phenomenon. One plausible explanation for this difference might be that whereas ESP is largely compulsory at polytechnics, it is basically an elective at universities.

The demand for utilitarian, 'service'-English led ESP to branch off early on into EST (English for Science and Technology) and EOP (English for Occupational/Vocational Purposes). For years, research, textbook publishing and teaching opportunities were concentrated mainly in these two areas. Voices in the wilderness were heard, but they were few and far between. Moreover, because large, traditional, long-standing universities can generally count on the services of an affiliated 'Language Centre' to cope with students' demands, no great effort is put forth to include "tailor-made" language courses in the regular curriculum.

Furthermore, supply and demand go hand in hand. Universities will only offer ESP courses if there is a pressing demand. After six or eight years of trying to learn a language but never seeming to get anywhere, who is about to demand more language classes! Besides, language classes are not science classes! Would a subject like ESP look good on one's academic record? Students must not only overcome these

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prejudices, but also their doubts as to just how much better, or more effective, ESP courses are than EGP courses. Moreover, the fact that ESP courses are not hard-core science courses, that the instructors are often part-time assistants, and the fact that they are often scheduled at off hours inevitably puts them in a second-class category in the minds of many students.

# The syllabus

First and foremost, ESP courses must meet university students' needs and expectations much more effectively than the EGP courses offered by the academy around the corner or the Language Center on campus; otherwise they are defeating their own purpose. One way for ESP to gain status and establish its own identity is through the syllabus. In institutionalized frameworks, students expect a rigid, predetermined syllabus. The strength of an ESP syllabus lies precisely in its flexibility. A rigid syllabus can deny creativity and hinder learning. Because students often confuse flexibility with disorganization or irresponsibility, it is important that they understand that adaptability is part of the underlying philosophy behind special purposes language teaching.

Learning English for its own sake is clearly no part of a science student's educational purpose. Relevancy is paramount. Courses must be devised in which English is the medium of study rather than its object. This implies exposure to a wide variety of texts and associated tasks. Because each text generates its own task, language processing (synthesizing, relating facts, scanning, defining, outlining, etc.) is continuous. Academic language skills—particularly reading and listening comprehension skills—are perhaps the best tools we can give our students.

Emphasis on academic language, as opposed to social language, has led to a new approach in syllabus design; namely, English for Academic Purposes (EAP). The consensus today is to offer 'broad-angle' EAP courses at tertiary level. That is, courses that are not subject-specific or language-centered like the early EST courses, but discipline-specific and learning-centered. In other words, not pseudo-chemistry classes centered around subject-specific vocabulary exercises, but topic-based (e.g., great scientists, chemical industries, issues in health sciences, etc.) courses centered basically on comprehension skills and study skills designed for a wider range of students. The incorporation of attractive, authentic, interdisciplinary readings, and viewings, and discussion topics of general academic interest will necessarily stimulate student participation and involvement. Involvement implies thinking and thinking learning. Only an EAP approach can give language classes in the science faculties the 'authority' and dignity they lack in the eyes of many of our students.

### Teacher status

ESP/EAP is a very challenging, yet very demanding field. Most English Philology graduates interested in entering the teaching field find jobs in secondary education. A few others go on to graduate school, get their PhDs and become professors in the philology department. Only a very few courageous souls launch out into the uncharted waters of ESP. Some are fortunate enough to find colleagues who can act as mentors; others must chart the waters alone. Secondary teachers are required to take comprehensive teacher-training courses; university instructors are just expected to know. As a result, because ESP is not strictly speaking an area of research within most departments of English Philology or Linguistics in Spain or Latin America, ESP practitioners are virtually left to fend for themselves. They learn by doing; they become 'qualified' by teaching.

The problem of isolation has been alleviated to an extent over the past few years by the founding of a national association, Asociación Española de Lenguas para Fines Específicos (AELFE), and the celebration of annual conferences (Congreso Luso-Español de Lenguas Aplicadas a las Ciencias, Jornadas Internacionales de LSP in Alcalá de Henares, Jornades Catalanes sobre Llengües per a Finalitats Específiques, etc.). The participation of internationally renowned scholars at these conferences, and Spanish participation in international conferences and workshops, is in itself proof of the generalized desire to be up to date on the latest trends in ESP.

Another aspect to consider, as far as status is concerned, is the general lack of PhD degrees among ESP practitioners. Since the majority of ESP teachers practice their profession in polytechnics or three-year professional colleges, where PhDs are not required, very few hold a doctor's degree. It is not always easy to find someone in the philology departments willing to direct a thesis on ESP. Consequently, the number of teachers technically qualified to teach at universities is limited. Feelings of inferiority and insecurity can easily creep in and this is counterproductive as lack of recognition can lead to underestimating one's capacities. Fortunately, in spite of all this, ESP research is on the rise in Spain and Latin America and the number of publications in English is growing. Likewise, the number of specialized ESP/EAP textbooks being published both with national and international publishers is also increasing. These contributions are having a very positive influence on ESP status both at home and abroad.

### Conclusions

Because learning is all too often effected by subject status, it is imperative that ESP establish its own identity in the Spanish-speaking academic world as an interdisciplinary, applied science. To help accomplish this goal, ESP practitioners must do all they can to ensure that their subject

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be given, within the university curricula, the status our 21st century European society demands. Hopefully, this new status—together with student awareness of the cultural and linguistic enrichment ESP/EAP courses offer—will contribute to more effective language learning in tertiary education.

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