

**THE ESP TEACHER AS A MATERIALS DESIGNER: A
PRACTICAL EXAMPLE**

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In this paper, a number of materials from different pedagogical sources will be analysed from the point of view of their suitability for the ESP class. Teaching English for Specific Courses has, in the last few decades, become an optimal way of adapting linguistic needs to increasingly diversified professional and social demands. Consequently, ESP teachers have to become materials designers, selectors and researchers of a multiple, complex reality to be brought to equally changing teaching settings. On the other hand, these materials must observe certain rules (above all, they will comply with the requirement of relevance), and be considered within the linguistic paradigms more favourable to this type of teaching. An example of material implementation through a concrete unit is provided, together with the sequencing, activities and skills involved. Special emphasis is placed on authentic texts and sources provided by the students themselves, who turn out to be, in many cases, the best orientation for the teacher.

Key words: materials design, ESP, interdisciplinarity

1. Introduction: the teaching of ESP

The teaching of ESP (English for Specific Purposes) in our universities, its inclusion in multidisciplinary curricula and the creation of *ad hoc* departments where specialised research is encouraged, has become a regular,

world-wide practice, destined to meet the linguistic demands of future professionals, especially in scientific and technological areas.

The peculiar conditions which this type of teaching imposes have been amply stated by one of its main theorists, Dudley-Evans (1997: 4-5). Among these, we can recall that ESP practice constitutes learner-centred teaching where most of the students are highly-motivated adults with at least some previous elementary knowledge of the language; emphasis is placed only on those aspects of English which are more relevant to the professional discourse involved; learning objectives are mainly communicative and immediate (short-term results are sought for); materials must be highly diverse, preferably taken from the specialised area; and finally, the teacher acts as a materials designer and as a collaborator in class, encouraging autonomous learning strategies and letting him/herself be inspired by the students' most urgent linguistic needs.

All these characteristics are grounded mainly on two different teaching paradigms, i.e., the pragmatic and the cognitive¹. The former, with its concept of *language in use*, has been studied in terms of communicative competence, contextualised teaching, attention to the sociolinguistic aspects of interaction and use of authentic materials, among others. The latter emphasises aspects such as the student's responsibility towards his/her own progress or the inclusion of creative tasks (regarding also evaluation techniques) within the syllabus, and is a solid framework for the implementation of technological aids in class (CALL or others). Both have to be taken into account, together with the characteristics of ESP, on proceeding to the design and selection of the appropriate materials.

¹ For an exhaustive relation of linguistic paradigms in language teaching, see Alcaraz (1990), except for the cognitive paradigm, for which Skehan (1998) must be consulted.

2. Selection of materials

For several reasons, the selection of ESP materials² constitutes a considerable challenge:

-ESP learning contexts are so numerous, different in content, duration, etc, that it would be impossible to gather them within a single syllabus model.

-Except in the case of Business English, there are not many published materials and they are not very frequently updated.

-As ESP teaching is focused on real settings, it needs to be fed by authentic materials which, in their turn, must be substituted for new ones at the same pace as science advances. The use of Internet has improved this condition considerably.

These challenges can be summarised in three conditions which all ESP materials must observe:

-They must be authentic or *credible* (simulate real situations).

-They must be interdisciplinary, i.e., the specialised area to which they are destined will also point to their origin.

-They must be used with flexibility and evolve according to context changes, both in terms of topic and transmission vehicle.

Basically, the origin of ESP materials can be classified as follows: EGP (English for General Purposes), ESP, reference, authentic and students' materials. A sample list is included in the bibliographic section. Let's consider them briefly.

² On introducing ESP, all theorists dedicate a chapter to the design and selection of materials and the difficulty it entails [see for example Dudley-Evans & St. John (1998), Hutchinson & Waters (1987), Robinson (1991) or Swales (1990)].

2. 1. EGP

Sometimes it is not necessary to reject material designed for English for General Purposes courses altogether. Nowadays any updated manual includes a number of sections dedicated to business, science and technology, health, education, etc, which can be easily employed for specific purposes. It is a clear sign of how formerly closed pieces of knowledge are becoming of general concern, at least in their informative version. Working with these materials can be ideal for students who face ESP for the first time or who do not have a good command of English in general terms.

2. 2. ESP

In this section we can find two types of publications: those issued by publishing houses, and those specially designed by teachers and usually released by their respective universities, or virtually shared on Internet. Very seldom can we find, among the first mentioned, a single method able to meet the demands of a specific course, in spite of their professional orientation. The second case constitutes exactly the opposite: methods are likely to be *too specific* as to be removed from their origin situation and serve somebody else's purposes. An exception to both offers could be the profusion of methods on Academic English, where written and oral skills can be extrapolated to different professional collectives (our would-be engineers, scientists, lawyers, etc).

2. 3. Reference

Grammars and dictionaries have also adapted their contents to the new teaching situations; thanks to this, we can find technical grammars and dictionaries especially designed for different areas of knowledge, not to mention electronic glossaries where almost all disciplines are included.

2. 4. Authentic

This source of acquisition knows no limits: instruction leaflets, journals, manuals, advertisements, Internet links, inscription forms, demonstration videos, statistics, job offers, etc. Such a large availability, however, can be pernicious in pedagogical terms if we do not make the effort to select and prepare very carefully what may actually serve the lesson purposes.

2. 5. From the students

Combined with the rest, it can be acknowledged that this is the best contribution by ESP to language teaching methodology. Asking our students to search for the information they will later work with in class (e.g. preparing an oral presentation) and, once we have provided them with the adequate linguistic frame to deal with any type of specific content, we can learn what they are really interested in. We will be able to make our teaching more relevant and students will feel more involved in their own learning process. At this stage, the ESP teacher acts as a collaborator and profits fully from the shared knowledge.

3. A practical example

A teaching unit of Technical English for Telecommunications Engineering will be shown in this section, so as to serve as an illustration of the combination of materials used. This unit belongs to a syllabus developed at the University of Cartagena during the academic year 2001-2002. The sequencing is as follows:

Fig.1: GIVING INSTRUCTIONS / DESCRIBING HOW THINGS WORK

ACTIVITY	TIME	TYPE	SKILL	MATERIAL
1st session				
Safeguards/ precautions	40 min	Group work	Reading compr.	ESP
Checking with Checker	50 min	Individual	Oral comprehension	Authentic
2nd session				
Grammatical points	30 min	Class work	Grammar	Reference
Practice	60 min	Pair work	Oral/ written expr.	Student
Review				
How does a video work?	30 min	Individual	Oral comprehension	EGP
La industria química en nuestra vida	60 min	Individual / group work	Translation/ oral expression	Authentic

The unit is divided into two sessions of 1:30 hours each; additional review materials are provided for further practice. Each activity will now be briefly explained. An example of the materials used can be searched for in the appendix section.

3.1. First session

Safeguards and precautions: It consists of five short texts issued by a French teacher of Technical English on the net (www.multimania.com/jcviel), where precautions when handling different devices are given. The purpose is to hold an agile, quick and shared reading; there will be a set of questions common to the different texts; in order to provide the answers, groups of students will have to share their respective pieces of information (none of them has the complete information). The questions arise as examples of *inductive grammar*: we do not give the rules previously but allow students to

detect linguistic mechanisms within the context and extract their own partial conclusions.

Checking with Checker: This is not pedagogical material, but an authentic technical demonstration video borrowed from one of the Engineering Departments at the University. A transcription with gaps to be filled is provided. The linguistic expressions appearing on the previous activity come up again, but now students have to recognise them through the oral discourse and in four stages: *presentation of the product, requirements, warnings and installation rules.*

3. 2. Second session

Grammatical points: So far, students have assimilated new structures corresponding to a language function quite at random. It is time to fix them with the help of technical grammar (Aguado and Pérez 1992). The three structures practised are: *time statements, use of modal verbs in technical descriptions and imperatives.* Examples are exclusively provided from the technical context. Together with grammar practice, we start to clarify pronunciation and spelling mistakes.

Practice: This section also requires homework. In pairs and as a free writing exercise, students will provide their own technical device, following the patterns previously given and using the necessary help (grammars, dictionaries, phonetic explanations). After that, they will convey their work orally to the rest of the class. Thus, we favour creativity and check to what extent students are ready to take theoretical knowledge to a simulated professional setting. In addition, as I pointed out before, the teacher comes across a unique source of material.

3. 3. Review

How does a video work?: This is an example of EGP material, taken from *The New Cambridge Advanced English* (2000). It is a listening comprehension exercise suggested as a review for the descriptive vocabulary

involved in the functioning of technical devices. It is quite easy and can reassure students' confidence in skills they had previously practised throughout the course, both oral and written.

La industria química en nuestra vida: An informative leaflet distributed by the regional government where instructions are given on how to behave in case of accident at the nearby chemical industrial plant of Escombreras. It allows students to practise translation (instructions are given in a simple, clear manner), as well as start a discussion of high social relevance. Very subtly, we can instil into them a 'humanistic' position with regard to the topic (e.g. what would be their responsibility, as engineers, when dangerous industrial activity takes place near urban centres?)

4. Conclusion

The unit shown is just an example of the variety, creativity and availability of materials which can be used in the design of an ESP course. It is a thorough task, destined to make our teaching more and more relevant for the students' specific needs. Its implementation in class, however, must be subjected to the linguistic paradigms most suitable for this type of teaching.

In general terms, students react positively to this combination of materials and welcome the opportunity to contribute. Future efforts towards an optimal relevance in ESP classes must lead us to closer contact with both the teachers and curricula shaping students' specialisation: if they learn, for example, about sensor technology at the same time as its corresponding vocabulary and language functions in English, motivation and future possibilities of use will be equally explored.

APPENDIX I

Safeguards and precautions (sample texts and questions)

TEXT 1: MINOLTA AF ZOOMxiLENSES - CARE AND STORAGE

- Do not touch the lens contacts.
- Never touch lens surfaces with your fingers. If necessary use photographic lens tissue, which may be moistened with a drop of lens-cleaning fluid. Never drop fluid onto the lens surface.
- When not in use, always keep the lens capped and stored in its cases.
- Store the lens away from heat, humidity, and harmful chemicals.
- Do not subject the lens to strong shock or vibration.
- For all service or repairs, contact an authorized Minolta service facility.

TEXT 2: TERRAILLON – ELECTRIC PERSONAL SCALE

Your new TERRAILLON personal scale has been designed to accurately indicate your weight gain or loss over a period of time and should give many years of service with normal use.

- Always weigh yourself on the same scale placed on a hard floor surface. Avoid using on carpet.
- Clean the scale with a damp cloth but do not allow water to get inside.
- Remove the battery if the scale is not being used for a long period of time.
- Battery requirements: 1 9V alkaline battery (insert the battery in the housing located underneath).

Which verb tense is used in texts 1 and 2?

Which verb form is found after AVOID?

Pick up a modal verb in text 2. What does it mean?

TEXT 1. Transform the sentences shown by using YOU MUST / MUST + PASSIVE (e.g. *you must not touch the lens contact / the lens contact must not be touched*).

Pick up the adverbs. Which is their position in the sentence?

APPENDIX II

Checking with Checker (transcription extracts)

REQUIREMENTS: When you unpack the system you should have: a checker unit; software; an I/O connector ... you will also need a lens, a light source and power supply.

WARNINGS: Before proceeding, please take heed of the safety precautions:

- On no account connect power to *Checker* unless all other devices have been disconnected.
- Ensure that nobody is working on the production line.

INSTALLATION:

- First, connect power to Checker.
- Then, switch on the PC. An aid programme will appear on your screen.

-Next, click on the icon “enter” and follow the instructions.

APPENDIX III

Practice (extracts from a student’s exercise)

HOW TO MAKE A CIRCUIT WITH A POSITIVE BAKELITE PLATE

The elements that you need are: a positive bakelite plate; a transparency; a flat glass; a fluorescent light (around 80 Watts); a chronometer; developer; quick attacker.

Step 1: First of all, be sure of the way of tracks and components. After that, print the circuit in a transparency or on a paper which allows light to go across it.

Step 2: Uncover the plate and put the transparency on the copper side. Be sure that the transparency is placed in the correct position. Then put on the glass without moving the transparency, turn on the lights and start your chronometer.

APPENDIX IV

La industria química en nuestra vida (extracts from the leaflet)

LO QUE SÍ DEBE HACER

Quédese en casa. Si está en la calle, refúgiase en el local cercano más próximo. Mantenga a los niños bajo atenta vigilancia, sin salir al exterior.

Desconecte el gas y la corriente eléctrica. Tenga siempre pilas en casa para escuchar la radio.

LO QUE NO DEBE HACER

No acuda a la zona afectada, no es un espectáculo y su presencia podría interferir en la actuación de los servicios de emergencia.

No use el teléfono si no es estrictamente necesario, deje las líneas libres para los servicios de emergencia.

APPENDIX V

Data from the questionnaire students completed at the end of the course:

1. La inclusión de materiales reales me ha parecido:
 - a) Muy útil ___ 66%
 - b) Bastante útil ___ 30%
 - c) Poco útil ___ 4%
2. La aportación de materiales hecha por mí me ha parecido (respuesta parcialmente libre):
 - a) Interesante y novedosa; me gusta participar en el diseño del curso ___ 71%
 - b) Me ha supuesto mucho trabajo ___ 22%
 - c) No me gusta la actividad, prefiero que me den las cosas hechas ___ 7%
3. Respecto al inglés general, el curso (respuesta parcialmente libre):
 - a) Me ha ayudado a manejar temas de mi especialidad ___ 85%
 - b) No me ha aportado mucho más de lo que ya sabía ___ 15%
4. Sugerencias más usuales:
 - a) Mayor variedad de temas y mayor conexión con la especialidad.
 - b) Más actividades audiovisuales.

References:

- Alcaraz, E. 1990. *Los tres paradigmas de la investigación lingüística*. Alcoy: Marfil.
- Dudley-Evans T. 1997. "An Overview of ESP in the 1990s" in T. Orr (ed.) *Proceedings 1997: The Japan Conference on ESP*. University of Aizu, 3-7.
- Dudley-Evans T & St. John, M. 1998. *Developments in ESP*. Cambridge: Cambridge University Press.
- Hutchinson, T. & Waters, A. 1987. *ESP: A Learning-Centered Approach*. Cambridge: Cambridge University Press.
- Robinson, P. 1991. *ESP Today: A Practitioner's Guide*. Hertfordshire: Prentice Hall.
- Skehan, P. 1998. *A Cognitive Approach to Learning*. London: Oxford University Press.
- Swales, J. 1990. *Genre Analysis: English in Academic and Research Settings*. Cambridge: Cambridge University Press.

Reference of materials

- Aguado R. & Pérez C. 1992. *English in Technical Engineering*. Universidad de Zaragoza: Servicio de Publicaciones.
- Bosworth-Gerome M. *et al.* 1994. *Écrire l'Anglais Scientifique et Technique*. Paris: Ellipses.
- Brieger N. & Comfort J. 1987. *Technical Contacts: Materials for Developing Listening and Speaking Skills for the Students of Technical English*. London: Prentice Hall.
- Comfort J. *et al.* 1993. *English for the Telecommunications Industry*. Oxford: Oxford University Press.

- Ibáñez A. & Duque M. 1994. *English Texts for Telecommunications Engineering*. Universidad Politécnica de Madrid: Servicio de Publicaciones.
- Jones L. 2000. *The New Cambridge Advanced English*. Cambridge University Press.
- Madden C. G. & Rohivk 1997. *Discussion and Interaction in the Academic Community*. Ann Arbor: University of Michigan Press.
- Moreno P. *et al.* 1990. *Gramática inglesa del texto técnico*. Madrid: EUITT.
- Viel J. C. 2000. *Resources for Teachers of English for Science and Technology*. www.multimania.com/jcviel