

## ***DEFINING EFFECTIVENESS FOR BUSINESS AND COMPUTER ENGLISH ELECTRONIC RESOURCES***

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Information Technology (IT) often proves highly convenient and practical for language learning purposes. This paper analyzes how IT can be incorporated into the ESP (English for Specific Purposes) curriculum. In particular, IT resources are considered effective if positive evaluation of learners' language command follows. First, IT resources should fit the language framework of ESP, and secondly, electronic applications should be developed according to target learning conditions. The primary focus is thus placed on technology possibilities of serving specific learning factors.

### **Introduction**

The application of Information Technology (IT) to Language Learning has produced a vast amount of resources during the past two decades. This merging began in the early 80s with the advent of the micro-computer and its popularity in educational settings by means of CALL or Computer Assisted Language Learning. In particular, the greatest increase in technological resources has occurred in English as a Foreign Language (EFL) and English for Specific Purposes (ESP), although there has been a wide coverage of all languages and domains from the scope of IT (e.g. LSP, Languages for Specific Purposes, and EAP, English for Academic Purposes). The IT developer should approach English courses and activities according to target learning situations. Such a task requires the use of technology to be placed at the service of learning factors and not the other way around, as Warschauer (2002) claims.

This paper analyzes the positive presence of IT in the ESP curriculum by examining two chief requirements of specific language learning: the key lexico-grammatical context, and the adaptation to the learner's needs in specific settings, e.g., those of Computer and Business English. We establish the two notions as criteria which would enable teachers to assess effectiveness of specific language learning tools in terms of communicative command. In this respect, the notion of effective electronic resource depends on useful language intake.

A representative combination of "language and content" should be prioritized in the ESP curriculum (Breedham and Bloor, 1989). Representativeness refers to the inclusion of both the

specific language (lexico-grammar) and content (subjects and topics) that can possibly appear in a subject area. In the Business and Computer Science disciplines, for instance, some subjects, like Database Management and General Business, are common core, according to the study programs. We believe that IT applications are effective if target language and content demands are pinpointed and satisfied through the exploitation of such electronic resources.

### **The language framework**

Language variation plays a fundamental part according to our ESP research (Curado, 2001). Linguistic diversity occurs in specific domains (e.g., Business and Computer Science) when two forces (centrifugal and centripetal) occur. The first one is based on linguistic common coreness, i.e., a given set of lexico-grammatical features is identified as recurrent across different disciplines (i.e., across various textual samples of the subject areas). In the common core approach, semi-technical constructions constitute the target language. For example, "data analysis", "gather + data", "market sales", "new information technologies", and so forth, are typical in texts handled for the shared context of business and computing, which includes the subjects: Database Management, General Business, Perspectives on Management, Marketing Techniques, Information Ethics, Management Information Systems, and Statistics. In contrast, the centripetal type of force leads to the categorization of key lexis according to topic divisions. An example would be the topic of on-line tax preparation software in Business and Computer Science, where lexical items such as "accounting systems" and "prior tax returns" uphold a technical measure as fixed compounds.

Language varies as technology evolves and changes. According to this notion, linguistic input depends on the type of content selected (i.e., if the material is updated and representative of the Business and Computer Science subjects mentioned above). In this scope, the variation factor is regarded as a basic assessment strategy to evaluate "useful linguistic material" (Curado, 2002). In our language framework, four main indicators serve to pinpoint lexico-grammatical priorities in the ESP setting: lexical density, collocation, semantic prosody, and register. By examining their value for specific language learning, we should be able to establish their importance in the integration of electronic resources.

The four indicators or variables serve as lexico-grammatical reference in our setting to measure linguistic production. Lexical density refers to the learner's word knowledge being acquired for specific purposes. Thus, given a restricted domain such as the common-core area where Business and Computer Science meet, an estimated 2,000-item vocabulary knowledge is highly

functional for academic and professional aims (e.g., to understand lectures or communicate in a business meeting). Our analysis agrees with previous research (e.g., Flowerdew, 1993).

Lexical behavior can be best described by "word position" (Ooi, 1998), i.e., how words combine according to the explicit contextual features influencing them. The notion, called collocation, significantly describes restricted domains; as a result, "collocational frameworks", as Luzón de Marco (2000) calls them, must take a chief part in the evaluation of ESP electronic resources. Through their appropriate exploitation in context, collocations can yield remarkable learning input. A similar linguistic development is produced with the concept of semantic prosody, which stretches out the notion of collocation by referring to the "connotation of certain lexical items" in particular contexts (Sinclair, 1996). An example would be the semi-technical construction "provide" + "access to", followed by the idea of digital or electronic resources in our domain (e.g., "can provide access to these new technology resources").

The importance of the fourth indicator, register, derives from the communicative purposes to which the specific lexico-grammatical elements are put. Thus, language can substantially vary according to the register employed. For instance, when writing in electronic forums, Business Science students may discuss specific topics in an informal manner (expressions like "gonna be," "it's fine," "OK," "good," "so you see," and so forth, are typical), while the same topics can be presented by conference speeches in an academic tenor (some characteristic constructions, in this case, are "as seen above," "it was argued that," "I am of the view that," "it is important to," etc). In the use of IT resources for ESP development, these register distinctions should be considered. In fact, language and content cannot be treated separately, and the aspects of lexical density, collocation, semantic prosody, and register (field, mode, tenor) should be ever present.

### **Adapting to specific learners' needs**

As Warschauer (1996) observes, different "communicative exchanges" take place in the learning setting; thus, IT resources adapt to these communicative shifts. The use of a more formal (academic) tone in the genre of conference papers vs. a more informal mode in electronic discussions (e.g., newsgroups), mentioned above, is an example of linguistic variation being accounted for. In this respect, a learner aiming to satisfy academic goals such as the successful comprehension of lectures should be able to find suitable electronic material that provides adequate exploitation in this direction. In contrast, a Business student concerned with producing effective output for business meetings should be allowed direct access to appropriate

conversational input. In the consideration of electronic resources, such premises should be central so that communicative effectiveness can be aimed through self-access and group work.

The notion of effectiveness in the use of electronic resources refers to the actual profit from these devices as communicative aid. An example of how the new technologies are helping learners with their language tasks is demonstrated in our courses every year. The fact that an increase in 87% of students in our ESP courses has accessed and exploited electronic resources during the 2001/02 academic year, provides ample evidence (in contrast with only 3% in 1997/98). In surveys and personal interviews learners claim that, indeed, the use of electronic material facilitates communicative skills for academic purposes. For example, integrating software and Internet possibilities through the application of PowerPoint to oral presentations in class is highly favored, while multimedia programs and CDs are used less for this type of task (12%).

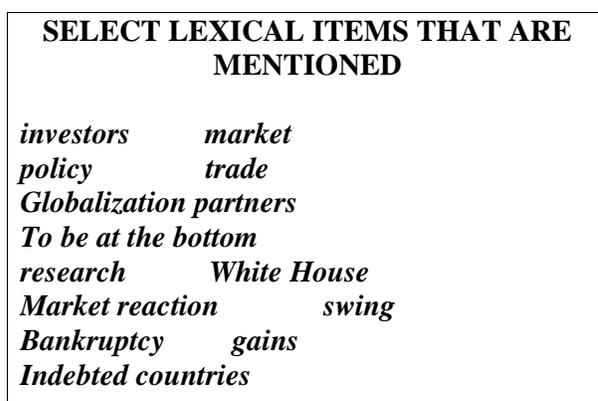
IT resources should therefore guarantee the instrumentalization of the language selected to achieve specific aims, such as filling in an information catalogue, or creating tables from data transfer. These activities should be integrated as part of the overall communicative work with the four macro-skills (reading, writing, listening, and speaking) in academic and professional tasks (e.g., giving oral presentations on a specialized topic, or writing reviews of business technology products). In this scope, we must strive to reproduce authentic and updated language in our setting by working directly with real examples from language use. Secondly, and equally important, meaning should be negotiated from different samples of use, and activities should be designed with specific academic and professional purposes in mind.

### **Effective ESP resources**

In this section, the main language + content characteristics of IT resources for effective ESP learning are identified at the planes of oral and written discourse. In the approach, the type of electronic facility sought should correspond to a model of linguistic activity that exploits the appropriate "chunks" of lexico-grammar in delimited situations. These contextual segments must derive from the analysis of common core and categorized language in specified subject fields (e.g., computer technology for business management).

In addition, needs and demands in the learning scenario should enable the identification of suitable exercise types. An example of academic demand is a lecture, which, in our context, can vary from a short (2 -3 minute) explanation of a concept or issue in business technology, to 15-minute descriptions of technical developments for firms. These oral deliveries may be freely

accessed through different web pages (e.g., the Brookings institute, <http://www.brookings.edu/comm/clips/archive.htm>), providing learners with the challenge of understanding the topic unfolded. One possibility, according to the notion of effectiveness defined, would be the follow-up of the lecture by means of key (topic-based) lexical clues. These should specify main and secondary ideas (pointing to themes and rhemes in the discourse). The purpose of the activity is for learners to acquire the necessary command of the linguistic units in context. Two follow-up exercises after listening to the lecture could be to have students re-organize the scrambled parts of the lecture, and to allow them to select the vocabulary that was mentioned from a list of random items (Figure 1).



**Figure 1:** Lexical exercise based on short electronic lecture about technology marketing

By focusing on genre-based information, learners can distinguish registers. In particular, electronic resources such as the Brookings institute mentioned above, and others that enable video downloading, e.g. Business Week online video reviews ([www.businessweek.com/index.html](http://www.businessweek.com/index.html)), can provide learners with free samples of oral genres for academic and professional purposes, e.g., lectures and interviews. It is thus important to challenge students with tasks that require them to contrast this genre-based content. An example would be to analyze parts of the oral discourse, as is done in Figure 2. The main purpose of activities like this is to point out genre-based similarities and/or differences between a more academic tenor and a less formal manner of presenting business-related topics.

**MONOLOGUE VS. DIALOGUE INTRODUCTIONS****PRESENTING STRUCTURE OF ORAL INPUT****INTRODUCTORY PARTS :**

- WHO IS DOING INTRODUCTION?
- HOW?
- WHO INTRODUCES TOPIC?
- HOW?
- WHO IS DOING MAIN TALK?
- WHERE ARE THEY FROM?
- WHAT ARE THEIR PROFESSIONS?
- WHAT ARE THE TOPICS?

**Figure 2:** Task to distinguish oral genre features online

Electronic oral resources offer ESP instructors numerous possibilities for exploitation through a diversity of exercise types. As can be observed, lexical constructions can be classified according to their context of use, be it a monologue or dialogue discussing similar topics in business technology. For intermediate and advanced students, the focus on distinguishing concepts and notions in the oral deliveries is beneficial, above all, if done as visually as possible (e.g., by means of graphics included in the presentation, or pieces of news presenting visual data). In addition, the assistance of transcripts tends to be positive for lower level learners, whose simultaneous work with the oral and written text leads to exploiting listening and reading skills. Figure 3 provides an example in the area of Telecommunications technology descriptions for EST (English for Science and Technology: [http://www.kjist.ac.kr/~slic/est/e\\_textbook-EST-STW-Chapter1-A.htm](http://www.kjist.ac.kr/~slic/est/e_textbook-EST-STW-Chapter1-A.htm)).

**Chapter 1:** Part A - Listening, Reading, Grammatical Structures and English Conversation Exercises

Click here to listen to the course instructor's instructions about how to use the etextbooks.

**EST Text 1A:** "A Smarter Power Grid" - Peter Fairle, *Technology Review*, MIT, <http://www.technologyreview.com>

In order to listen to the course instructor read the text, click here to complete the Listening Exercise.

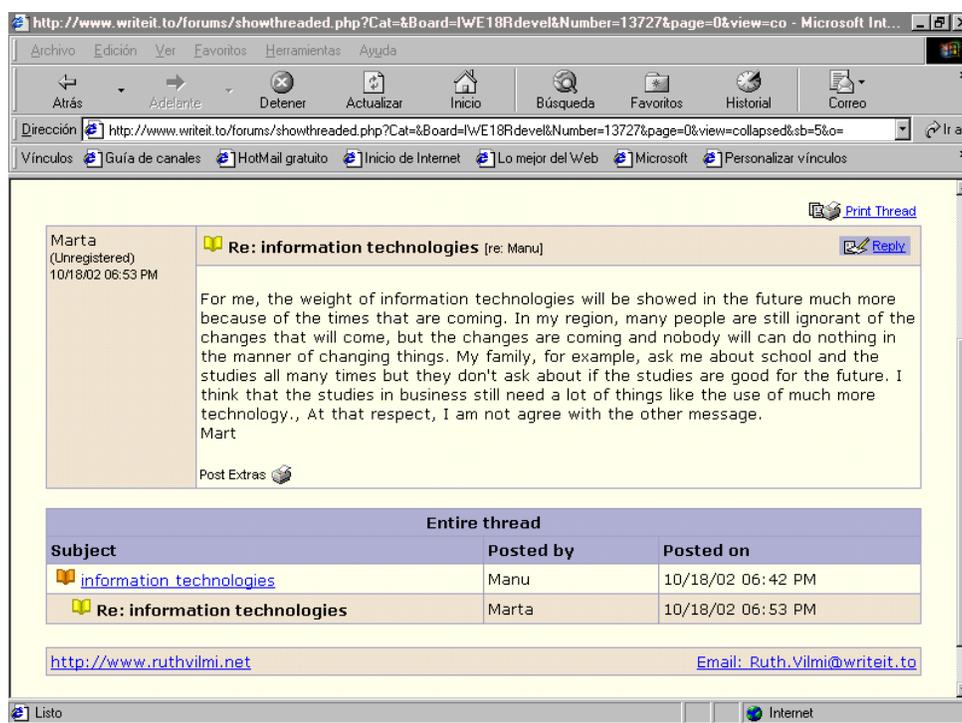
(students will need a sound card and Quick Time, or Real Audio, or any other audio software from MS installed in the computer)

Click on a [.pdf-techtransfer/smartpowgrid.pdf](#) **Smarter Power Grid** and use Adobe Acrobat Reader to read the article.

**Figure 3:** Example of EST lecture based on an e-textbook

The website in Figure 3 presents textbook language, in contrast with the resources mentioned for Figure 1 and 2, where authentic oral discourse is produced. Figure 3 thus integrates both oral and written modes at a lower level of language learning, affording technical and semi-technical vocabulary exploitation by means of exercises based on a specific topic, "Power Grids", in Engineering studies. A direction to a clear subject-area is also provided (i.e., technology for Engineering studies) at a beginner's ESP level, where "textbook readings and information decoding" tend to be favored (Curado, 2001).

Finally, at an intermediate stage, another example of effective electronic resource for ESP is examined in the case of a growing written genre, the electronic discussion. This is primarily considered an academic text type, dealing with specific topics across university-related disciplines. The discussion provided by newsgroups and mailing lists can thus be identified as a new electronic genre, where conversational writing tends to "combine with academic discourse" (Curado, 2002). A forum created for learners' attempts at this type of written text, such as Ruth Vilmi's website (<http://www.ruthvilmi.net/hut/Current/iwe.php>), can provide the suitable conditions for writing about business technology and computers for the office, as Figure 4 shows. The illustration suggests learners' instrumental communication, fostered by their motivation to be a part of an international community where students can reply to each other regarding a subject area. Likewise, their language command can be demonstrated in this type of facility.



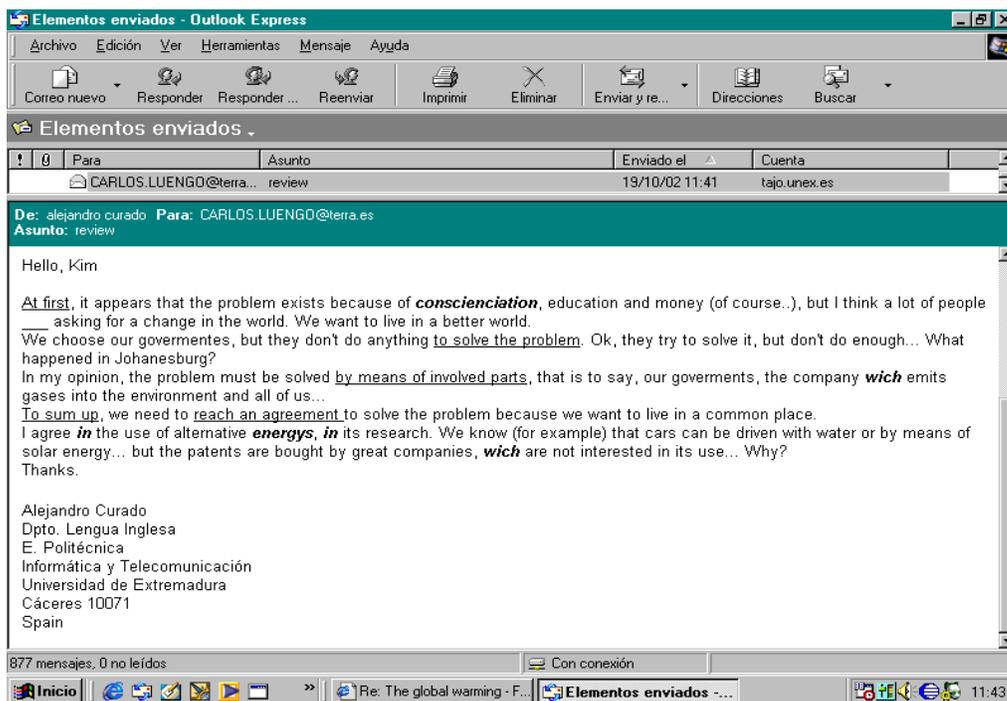
**Figure 4:** Ruth Vilmi's academic writing forum on the Internet.

### Evaluating effective use of electronic resources

To assess whether effective use of electronic resources is made, evaluation of learners' communicative tasks is conducted in class or in a self-access mode. In the case of oral tasks, for instance, students downloaded and viewed videos such as lectures and interviews. After they have exploited the contents by means of written exercises (e.g., Figure 1 and 2), learners are asked to produce either summaries (of monologues) or simulations (of interviews) in which material preparation and specific language are evaluated. The instructor's attention is thus placed on the activation of specific vocabulary and phrases related to the subject content (e.g., Figure 1). In addition, adaptation to contextual variables, such as formal greetings and introductions in the interviews, is checked. Regarding textbook reading comprehension effectiveness (e.g., Figure 3), in contrast, the main assessment is carried out on content summarization skills.

In the evaluation of effectiveness for written tasks, such as Figure 4, the process involves a self-access approach by which learners first submit their writing by e-mail to the instructor. They are then in charge of highlighting language mistakes for subsequent revision. The reviewing process can take place either individually or in pairs in a peer review mode. In the

second draft, mistakes are highlighted again, but effective expressions are also included by underlining (Figure 5). The learners are thus left to decide whether they should need to make any other changes before they post the written document on the electronic forum. At the same time, they are made aware of their lexico-grammatical strengths (in Figure 5, underlined constructions based on collocational feedback from Business and Computer English).



**Figure 5:** Evaluating lexico-grammatical use in electronic discussions.

## Conclusions

This paper has examined the notion of effectiveness for IT resources integration in the ESP curriculum. Selection of fitting electronic media is done by previously valuing whether particular Business and Computer English demands are met in term of key language and content. In addition, the demands and levels of ESP learners are considered upon selection of the appropriate academic and professional text types or genres. Distinction is thus made concerning the stage of communicative competence agreed upon for each year of studies. In this respect, resources providing exploitation at both oral and written discourse planes are considered, and attention is placed on degree of complexity. In terms of communicative events and aims, learners' oral and written output is assessed after they have used the IT facilities. These are valued as effective if performance turns out to be a positive experience for both

teacher and student (in sum, if good marks are achieved). Objective evaluation criteria are mainly based on the production of fitting lexico-grammatical items in the domains.

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