

## GETTING MESSAGES ACROSS: THE INTEGRATION OF PROFESSIONAL COMMUNICATION SKILLS INTO ESP TEACHING

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**Abstract:** For many years, ESP instruction was confined to teaching specialized terminology and translating texts. However, today's globalized professional environment requires that its members should also master a set of communicative skills that round off their specialist knowledge if they are to complete their tasks effectively and preserve their margin of success. In spite of the apparent need for professional communication proficiency, there seems to be insufficient available research supplying an accurate understanding of the methods of teaching professional communication to undergraduate students as part of the ESP curriculum. This paper discusses the core skills underpinning successful professional communication and attempts to present a functional integrative professional communication model to be used in academic settings, with an emphasis on the use of English in an engineering environment.

**Keywords:** professional communication, ESP curriculum, engineering graduates, English as a lingua franca.

### 1. Introduction: The Demand for Soft Skills

The process of globalization has entailed a melange of distinct cultures, races, and economies, creating a *global village*, a border-free environment, and proliferating political and cultural relations of similar values. In today's multinational and globalized businesses, an internationally understood language is the sine qua non component, and for many decades now English has enjoyed the status of the *lingua franca*, which ensures a seamless way of communicating and sending messages worldwide. According to David Crystal (1997), both real and virtual conversation between business people or academics of different nationalities would be impracticable or expensive without a common language. We should nevertheless mention that what we are witnessing with the rise of English as a world language and main vehicle for communication is not a *linguicide* (i.e. a dominant language makes extinct other languages) and should not impede linguistic identity and diversity. As geolinguist Roland J.-L. Breton (2000) puts it, "[t]he spread of English may be seen as a positive development which saves resources and makes cultural exchange easier. After all, [...] the advance of English is not aimed at killing off local languages but is simply a means of reaching a wider audience."

Even though English is not the language with the greatest number of native speakers, in the economic and industrial environment worldwide, people would rather use English for communication than any other language, and the reasons for this are numerous: to mention just a few, training sessions, negotiations, and meetings are conducted in English; most business software products are written in English; English is the default language of technology transfer, academic publishing, the Internet, international conferences, and political gatherings; it is a relay language in interpretation and translation; the economic recession has led many engineering graduates to seek international careers. In the age of globalization, engineers can no

longer survive on technical skills alone. Thus, the ability to communicate technical and non-technical information in English has become a must for engineering graduates and professionals, who should not only be efficient communicators but also perform their communicative acts in English. "Technical expertise alone is not enough", states Ted W. Hissey (2000: 1367), who pleads for the development of "soft' skills", including communication skills, to supplement the engineers' job-specific technical knowledge. In the same vein, Hansen & Hansen consider that the recruit should be first and foremost an "exceptional listener and communicator who effectively conveys information verbally and in writing".

A number of surveys conducted recently list communication skills among the top five employability technical and non-technical competencies that companies seek (*Training Reference* 2006). However, employers have frequently and publicly complained about the engineering recruits' inadequate levels of communication. According to a study conducted by Rădescu and Precup (2009: 8) at Universitatea Tehnica de Cluj-Napoca, 94% of the employers hiring UTNC graduates consider that the ability to communicate in a foreign language is important, and less than half of the respondents are content with the recruits' language proficiency.

Ineffective or insufficient communication skills throw a bad light on the professional engineer's career, and, even more importantly, hinder employee performance. Yet, like any other skill, effective communication can be taught, though not without conscious effort on the part of curriculum designers. In response to the young engineers' inadequate ability to communicate in English in Romania's industrial sector, this paper presents a practical integrative Engineering Communication curriculum, designed to enhance the communicative skills of both local and international Engineering students at the *Lucian Blaga* University of Sibiu.

## 2. English for Specific Purposes and the Role of the ESP Practitioner

ESP (English for Specific Purposes) provides the theoretical and practical methods for coping with the pressing professional communication demands of today's global world, when efficient English language instruction is crucial. A branch of ELT (English Language Teaching) emerging after the Second World War, when there was a huge expansion of science, technology, and business all over the world requiring an international language for specialists, ESP was defined by Hutchinson & Waters as "an approach to language teaching which aims to meet the needs of particular learners" (1987: 21). As Hutchinson & Waters indicate, the chief difference between GE (General English) and ESP consists in the "awareness of a need" (1987: 53). ESP students are current or soon-to-be specialists needing English for their job-specific field, aware of their learning needs and knowing what they should expect from the ESP course. Thus, ESP is not a language product, but rather "an approach [...] in which all decisions as to content and method are based on the learner's reason for learning" (Hutchinson & Waters 1987:19). To be more specific, ESP derives from the need to use language as a tool in facilitating success in professional life.

A more recent approach to ESP, formulated by Dudley-Evans & St. John, also places great emphasis on learner needs and further identifies the five key roles of the ESP practitioner: teacher, course designer and materials provider, collaborator, researcher, and evaluator (2007: 13). Thus, ESP practitioners are invested with a more complex role than General English teachers: besides teaching, they must collaborate with subject specialists in order to design a syllabus centred on learner needs, select

and adapt appropriate material that has already been published, write new teaching material, and assess the efficiency of the material used for the course.

The practical course in English for Engineering taught on a weekly basis to first- and second-year undergraduate students has been adapted to meet the challenges posed by the demand of the Romanian industrial segment for fluent, clear, and persuasive communication in English. Apart from its two overall goals, namely language acquisition and communicative effectiveness, the course includes a number of subordinate purposes, such as building the students' confidence in trying out the language they already know, enabling their spontaneous interaction, providing students with the opportunity of trying out communication strategies and benefiting from noticing how peers express similar meanings, engaging them in using language purposefully and cooperatively, developing their confidence that they can be good (engineering) communicators, and last, but not least, providing students with an awareness of the importance of communication to the professional engineer.

### 3. Theoretical Background: *Social Learning* and the *Spiral Curriculum*

The course draws on the key implications for present-day education of the theory of *social constructivism/learning*, derived from the idea that teaching methods need to move beyond rote learning and memorising material towards the more effective learning-by-doing. According to McLeod (2007), the Russian cognitive psychologist Lev Vygotsky, the mastermind of the theory, placed considerable emphasis on the social context of learning, noting that social interaction precedes cognitive growth. As envisaged by Vygotsky, a constructivist instructor works towards creating the optimum environment for learning, in which students engage in peer interaction that encourages and facilitates language acquisition and professional communication. Yet, the instructor's role is not merely to stand by and watch students interact, but rather to act as a guide to them as they approach problems, encouraging their communication and offering advice as they deal with problems grounded in real-life situations.

The constructivist approach underpinning the English for Engineering course under discussion is further reinforced in the application of Jerome Bruner's concept of the *spiral curriculum*, an approach to education that insists on the re-examination of each topic or skill at periodic intervals, each time at a more advanced level. As Bruner explains, for learning to take place, "[a] curriculum as it develops should revisit basic ideas repeatedly, building on them until the student has grasped the full formal apparatus that goes with them" (Smith 2002). To put it more simply, learning is best achieved through cyclic exposure to a concept. The theory of spiral curriculum is grounded in the idea that reasoning and intuition developed in a gradual learning process, and Bruner's model attempts to mirror this process in the classroom. Like Vygostky's approach, Bruner's method deterred students from simply memorizing information, and emphasized the acquisition of skills and knowledge based on personal discovery, which is the real goal of any worthwhile educational process. "We teach a subject", Bruner maintains, "not to produce little libraries on that subject, but rather to get a student to think [...] for himself, to consider matters as a historian does, to take part in the process of knowledge-getting. Knowing is a process, not a product" (Clabaugh 2010). He believes that the instructor's role is to assist and guide students in their learning needs and to provide the appropriate structured social interaction, a process that he calls *scaffolding* (McLeod 2012).

#### 4. The Integrative Communication Model

The theories described above govern the design of a course in English communication tailored with a view to developing specific and non-specific language skills that can serve as a basis for use in professional careers within the engineering industry, as opposed to a language course mainly emphasizing the teaching of engineering terminology. This approach makes possible the integration of knowledge scaffolding, which, in its turn, enables the acquisition of communication skills throughout the different levels of the undergraduate programme. Thus, skills and knowledge acquired during the first year of study are taken further and enhanced in the second year. Drawing on scaffolded learning, the integrative communication model is also intended to dispel certain entrenched and unconstructive preconceptions that engineering students share with respect to English learning, by motivating them through a wide range of communicative activities in order to foster a set of communication skills that they can subsequently bring to bear in their day-to-day pursuits.

##### 4.1. Samples of Course Activities

Engineering students are motivated with a wide range of student-led formal and informal communicative activities designed to complement the technical engineering courses they undertake to complete their degrees. They can be assisted in boosting their speaking skills through a careful selection of authentic materials and tasks adapted to their level and needs and designed to encourage interaction with their peers in the classroom.

The main emphasis of the course is on listening, speaking, and using English actively in practice, through role plays and discussions. During each course, students complete a number of communication assignments that require practising pre-taught technical vocabulary—including presentations, interviews, oral reports, letters, written reports, and proposals. These assignments typically focus on integrating topics from non-engineering courses with engineering topics.

Examples of assignments include the following:

- (1) Showing a non-specialist visitor around the plant and describing technical concepts by means of simplified language. The students practise the ways of describing a device or technology type with which they are familiar. Students complete the task in pairs, taking it in turns to be the guided tour host and visitor.
- (2) Describing technical problems that the students have experienced with a device, equipment or vehicle and acting out in pairs a phone conversation between an engineer and a helpline consultant.
- (3) Each student begins by writing down the name of the chosen product, and makes notes of its main applications and functions. Students take turns to describe the applications and functions they have listed. To ensure the task is interactive, students sum up and rephrase what their partner has said.
- (4) The students do an environmental audit for a number of applications and materials and act out the conversation.
- (5) The students act out a dialogue between a safety inspector and an engineering manager about the suitable health and safety precautions for certain operations on a steel petrol storage tank at a processing plant.

Furthermore, through an array of formal and informal learning strategies that insist on active involvement and practice conducive to effective communication, students are acquainted with fundamental research methods, including:

- (1) finding and critically evaluating academically suitable sources;
- (2) writing coherent descriptive or argumentative paragraphs with sources integrated appropriately;
- (3) making oral presentations of their findings in front of an audience.

The integrated character of the course within the engineering curriculum makes sure that the chosen research topics are applicable to engineering practice. In order to promote the students' understanding of their professional duties as engineers working within a community, an attentive selection of the research topics ensures that they mirror not only industrial but also social concerns, such as environmental sustainability and ethics.

A sample of research project undertaken by students focuses on the effects that apparently unsophisticated past or present-day technology has on a community. Instances of such technology include the wheel, the abacus, wind power, various hunting tools, e.g. the sling, the boomerang, poison arrows, the harpoon, or a particular type of irrigation system. Students are to focus their research on the following aspects:

- (1) the operating principle underlying the technology;
- (2) its practical application and success in solving real-world problems and fulfilling needs;
- (3) its impact on the users' survival rate and life quality;
- (4) its durability.

Extended accounts of the history of the technology are to be provided only as succinct background data. The extent of the research should be confined to the examination of a few distinctive features of the effectiveness of the chosen technology.

#### **4.2. Feed-back from Students**

The assignments included in the integrative Engineering Communication curriculum were well received by most of the students. They reported that they felt that the learning experience was engaging, educationally valuable and rewarding, and argued that the tasks appealed to them because they anchored them into real life situations and filled in the existing gap of their technical instruction.

#### **4.3. Student Progress Assessment**

The syllabus includes a set of oral and written formal assessments carried out at regular intervals and designed to determine whether the students are making adequate progress, to measure the students' ability to apply their acquired knowledge and skills, and to adjust the instruction process to meet student needs. Feedback is offered at all times so that students may reap the most benefits from self-reliant learning.

### **5. Conclusion**

An ever-expanding variety of skills is vital for engineering graduates who need to keep up with today's global work environment, characterized by marked competitiveness. With English being nowadays the bridge language of technology and commerce, academics and industry professionals have frequently acknowledged the need for improved communicative proficiency required by such activities as teamwork,

writing reports, delivering oral presentations, problem-solving, liaising with customers and colleagues, participating in meetings, decision-making, building relationships, gathering information, and conflict resolution, and for engineering education to promote professional communication skills, which should be coupled with technical skills, in order to act as a career enhancer.

As a result, in the last decades, more and more language instructors have committed themselves to bringing their students to a point where they effectively communicate in the target language. Balanced academic programmes that integrate technical skills and professional communication both in the students' mother tongue and in second/foreign language instruction have been created in Engineering Schools, providing learning opportunities for students who need to develop their communication skills and apply these skills in their current or future day-to-day activities. To meet their needs, the content of ESP courses has been designed to include material and communicative tasks that students can authentically use in outside class contexts.

The benefits of the embedded ESP courses are two-fold: on the one hand, through English instruction, students acquire and develop a set of transferable skills that they will apply throughout their careers. If one of the main objectives of higher education is to prepare students for their future needs, then these integrated courses can successfully implement this. On the other hand, from the perspective the ESP instructor working in an academic environment, a lot more may be achieved through these courses than by merely teaching the target language.

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