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Technical communication as strategic communication. characteristics of the English technical discourse

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Abstract

The present paper is an introduction into the domain of technical communication; it presents the relationship between technical communication and general communication and introduces the main forms of technical communication, written and oral. The study focuses on the difference between ‘expressive’ and ‘strategic’ communication and sets the domain of technical communication into the sphere of the latter, while enumerating the criteria which must be taken into account when categorizing texts as belonging to the technical domain: audience, relationship, purpose and context. Further on, the paper focuses on the necessary stages that the production of a technical communication model must undergo: gathering, organizing, presenting and refining information. It also lists the principles of a good technical text: technical accuracy, usefulness, conciseness, completeness, clearness, consistency, correct spelling, grammar and punctuation, a targeted audience, clear organization, interest.

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1. Introduction

The present paper is an introduction to the concept of communication models in technical English. It sets the premises which are necessary for an accurate acquisition of the theoretical and practical tools which will enable
students in Engineering and other technical domains to make adequate use of both written and oral models of communication in both academic and professional environments.

Technical communication models for the engineering domain are placed into the wider scheme of general communication practices, with the theoretical aspects that they entail.

The objectives of this paper are the following:
1. to introduce the subject of technical communication as a distinctive part of social and professional interaction;
2. to outline the features that make technical communication a distinct sub-domain with a clearly defined professional purpose;
3. to familiarize target audience (Engineering students and professionals) with the key concepts of technical communication features.

2. Technical communication versus general communication

The English technical discourse, also called by various other names (English for Science, English for Technology, Technical English) is part of a larger domain commonly referred to as English for Specific Purposes which, in turn, belongs to the more general domain of communication in foreign languages.

The use of the English language to disseminate the results of the engineers’ activity is now overwhelming, partly as a result of globalization, with its inevitable consequences, and partly as a necessity of finding a lingua franca of technology which should constitute the means of propagating the latest developments and innovations in this field.

The communication of science, with its inclusion of the area of technical communication, is integrated into the larger scheme of general communication, thus preserving its social character deeply anchored in the realities of the community of speakers. The strong relation between science and communication is obvious when envisaging science as a direct result of communication. All forms of communication (written / spoken) are socially rooted; they arise in a certain social and cultural context. The same can be asserted about science and more specifically about technology. Technological advancements are not made in a vacuum, in a sterile and isolated environment; on the contrary, technology is a collective enterprise requiring teamwork, human interaction, collaboration on different levels and ultimately, communication strategies adapted to the specific purposes.

However, despite the fact that the communication of technology is part of the general communication scheme, sharing its most prominent features, it cannot be fully explained and perceived in completely identical terms. According to the general communication scheme, the constituents of a communication act are the sender (encoder), a channel of communication and a decoder (receiver).

The sender (encoder) is the initiator of the communication act, who receives a stimulus to send his message across; he chooses an appropriate verbal / non-verbal code and gives the message the appropriate form (channel). The message is sent to the receiver (decoder) who decodes the message and perceives it, offering a reaction (some feedback).

When applying this theory of human communication to the specific field of technical communication, it appears to be incomplete. James Collier and David Toomey [1] identify two reasons of this incompleteness:

- By focusing exclusively on the message, it fails to outline the importance of the people involved in the communication process. A good theory on technical communication should also be centered on the actors of the communication roles, on their professional characteristics, on the special features of their formation, on the context which facilitated the communication act.
- This general communication scheme identifies the transmission of the message as the only purpose of the communication act. However, communication of a technical type (and not only) may have a multitude of purposes, of which the transmission of information is only one: it may alternatively be intended to propose, to argue, to persuade, to defend, to coerce, to instruct etc.

Another popular misconception with regard to the character of the technical discourse is the idea that, being a type of discourse which is devoid of all subjective interpretation and alternative meaning, communicators should concentrate on content exclusively, in an illustration of an old Latin dictum: “res ipse loquitur” (words speak for themselves). While it is true that stylistic ornaments are not a feature of technical discourses, it is equally true that people speak the words. Therefore content is only meaningful and the purpose of the communication act is only
achieved if people (actors in the communication process) adapt the model of communication in such a way that best serves their purposes. Especially in the case of technical discourses for engineers, where accuracy and precision in communication are of utmost importance, great care should be paid to the selection of the adequate model, with their ensuing characteristics.

While the scope of the present paper is not to focus on technical communication models in an exhaustive manner, it is nevertheless useful to include a brief overview of what we consider to be the most common and widely used types of communication in engineering environments, for both academic and professional use. Among the written models of communication we note the technical report, the laboratory report, the instruction manual, alongside with more general types of texts from the sphere of professional communication: the memo, the proposal, the formal letter, as well as the dissertation paper and the scientific article. Among the oral types of technical communication we mention primarily oral presentations on technical subjects, public defenses and job interviews.

3. Technical communication as “strategic communication”

Based on the premises established above, it is useful to approach technical communication as a ‘strategic’ type of communication and thus create a more logical and realistic role of technical communication. Scholars typically distinguish between expressive and strategic types of communication [2].

a) Communication is ‘expressive’ when its sole purpose is to express thoughts, feelings and attitudes. What matters in the case of expressive communication is the sender and the message from the previously described communication scheme, with no interest whatsoever in the receiver and in feedback.

b) Strategic communication has a clearly defined purpose in a given social context and an equally clear impact on a specific audience. All the elements of the communication scheme have their active role in communication. Receivers are expected to believe, understand, argue and react to the message.

Technical communication in all of its forms (‘models’) is an instance of strategic communication. Luis Trimble [3] gives the following definition of the technical discourse: “EST (English for science and technology) writing is that type of discourse that has as its purpose the transmission of information (fact or hypothesis) from writers to readers; therefore it uses only a limited number of rhetorical functions. It does not, for example, make use of such rhetorical functions as editorializing, non-logical argumentation, poetic images, or those functions that create emotions such as laughter, sadness, etc”.

From this perspective, the necessary ingredients which must be considered for the proficient production of accurate communication models are the following:

- **Audience**: the first factor which a good communicator in the technical field should consider is who he/she is speaking / writing to. The receivers of the message may be colleagues, co-workers, superiors, professors, subordinates, clients, professional / academic community etc. The choice of the discursive features and of the register marks will be highly dependent on the people to whom the message is directed.

- **Relationship**: closely related to the first element, the relationship between the communication agents are important in deciding the right discursive patterns. The choice of the communication model and of its subsequent traits is influenced by the relationship between the sender of the message and the audience. The marks of the discourse must be carefully tailored to suit the already established relationships.

- **Purpose**: all communication acts have one or several purposes attached to them. These purposes dictate the choice of one or another model of communication, of strategies and styles. Traditionally, there are three identified purposes of communication acts:
  - **persuasion**: the intention of the communicator is to convince the audience of the rightfulness of the principle / ideas / concepts he/she presents;
  - **instruction** (information), intended to transmit and enrich the audience’s knowledge with regard to specific aspects.
  - **Entertainment**, intended to provide relaxation, amusement or leisure.

However, these three purposes are too restrictive for the wide area of possibilities that nowadays special forms of communication may embrace. William Keith [4] suggests the following categorization of purposes:

- Open new possibilities of belief or value;
- Propose change in ideas or action;
Build credibility for future persuasion;
Establish credibility for current persuasion;
Create doubts about opposing ideas/actions;
Refute opposing ideas;
Create an audience;
Build community with audience;
Ratify or reinforce community values or ideas;
Ask for small changes in belief/action;
Ask for moderate changes in belief/action.

- **Context**, or the setting for communication. Some of the most common aspects of context include:
  - Interpersonal context (one-to-one communication: instructions, commands, discussions in a professional context)
  - Small group (team communication)
  - Organizational (memos, proposals, reports, other forms of formal correspondence)
  - Public address (oral presentations, conferences, lectures etc)
  - Mass communication (scientific articles, dissertations, etc).

Among the most common marks of scientific language, one should note: the logical organization of the text in headings and lists, using relatively shorter sentences, the preponderant use of present tenses and the use of the active voice.

The technical communication, in all of its forms (written, oral or other) is essentially strategic. It is deeply rooted in a social context – the professional environment -, the participants are actively involved in the production of meaningful messages and the objectives are clearly expressed.

The concept of technical communication may embrace any form of communication on a specialized (technical) topic, either written or oral, with an assumed objectivity. Also referred to as factual communication, technical communication relies on a set of methods used by writers with the ultimate goal of creating easily accessible information for a specific audience.

In order to be able to use the different models belonging to technical discourse in an adequate manner, it is important for future engineers to understand, recognize and make proper use of the distinct marks of scientific language.

Gary Blake and Robert Bly [5] identify ten principles which make a technical text a good one, thus formulating a standard to be applied to all technical discourses. These principles are: technical accuracy, usefulness, conciseness, completeness, clearness, consistency, correct spelling, grammar and punctuation, a targeted audience, clear organization and interest.

The application of the above-mentioned set of principles in the process of writing technical texts is likely to result in a correct appraisal of their qualification to the sphere of technical writing. Individuals interested in the production of technical documents (engineers, engineering students, researchers, etc) can use this tool in order to make sure that their productions meet the required standards of engineering discourses.

4. **Conclusions**

The inclusion of the technical discourse in the domain of strategic communication is based on its specific character which is deeply rooted in a social and professional context. A text belongs to the technical sphere if it meets a set of commonly acknowledged criteria. By applying this testing too, individuals interested in the production of technical discourses may differentiate between different degrees of technicality of the text, depending on its rhetorical purpose, on the context and on the level of reader. The knowledge and correct application of the inherent constituents of technical discourses is a sine-qua-non condition for the production of relevant, accurate and correct technical documents.

**References**


