TECHNICAL COMMUNICATION IN ENGINEERING : writing and oral presentation

Universidad del País Vasco Euskal Herriko Unibertsitatea

OCW OpenCourseWare

LESSON 1

Introduction and importance of technical communication in engineering

1.1 Introduction.

1.2 Communication and its importance.

1.3 The steps in communication and quality criteria.

1.4 Communication format.

Figure 1

1.1 INTRODUCTION

This Lesson 1 defines the main objectives of communication, its importance, the steps to follow during communication and the criteria that determine the quality while communicating. In addition, this lesson will describe the main sections that a technical document contains and the format in which these documents can be found. Lesson 1 will serve to define the basic concepts to proceed with the subsequent courses.

LEARNING OUTCOMES

By the end of this lesson, it is expected that the student will :

- Provide the required value to the communication in technical aspects.
- Number the diverse parts involved in communication.
- Identify the aspects that determine the proper quality during communication.

1.2 THE COMMUNICATION AND ITS IMPORTANCE

DEFINITION

- The communication is defined as any action that results in the **exchange of information**, helping the **interaction** between communicators and **resolution of complex problems**.
- In general terms, the communication should serve as a tool to **capture the attention of the recipient** and increase the impact of the message.

Figura 2

MAIN OBJECTIVES OF COMMUNICATION

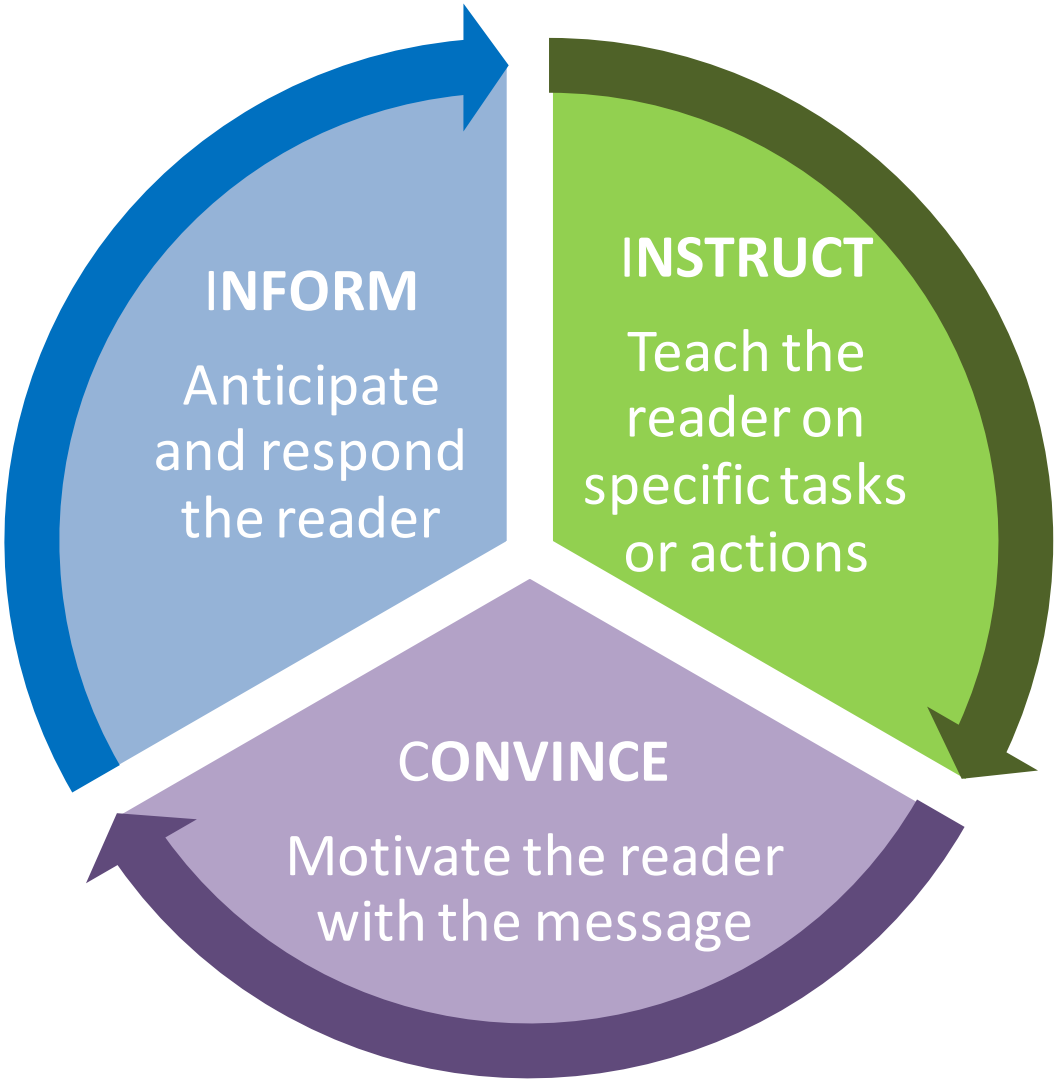

Figure 3

1.3 THE STEPS DURING COMMUNICATION AND QUALITY CRITERIA

SHANON WENER MODEL

- Define the communication as a tool for exchanging information between different parties :

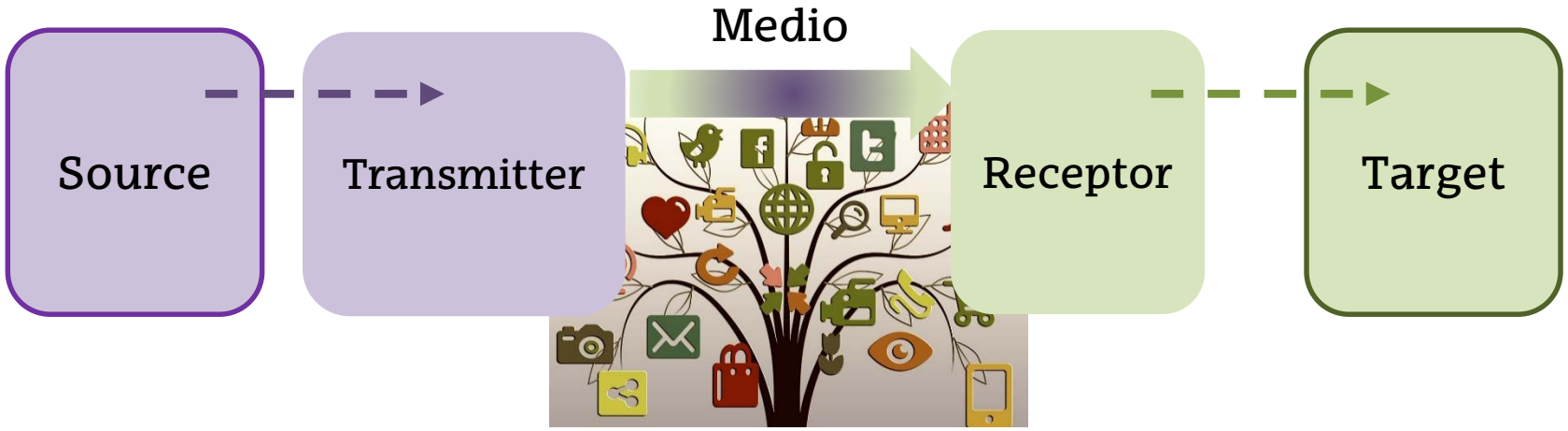

Figura 4

- These parts become affected by the "noise" that can alter the medium used for communication.
- This model also defines that the quality in communication reflects the conservation of the original message between the different parties.

QUALITY DURING TECHNICAL COMMUNICATION

- Within a working group, the time invested in communication (corresponding to 50-75%) is often much more than the time invested in the resolution of technical or complex problems (25-50 %).
- A communication procedure with proper quality can save time and enhance the working efficiency. Thus, a message with quality must:

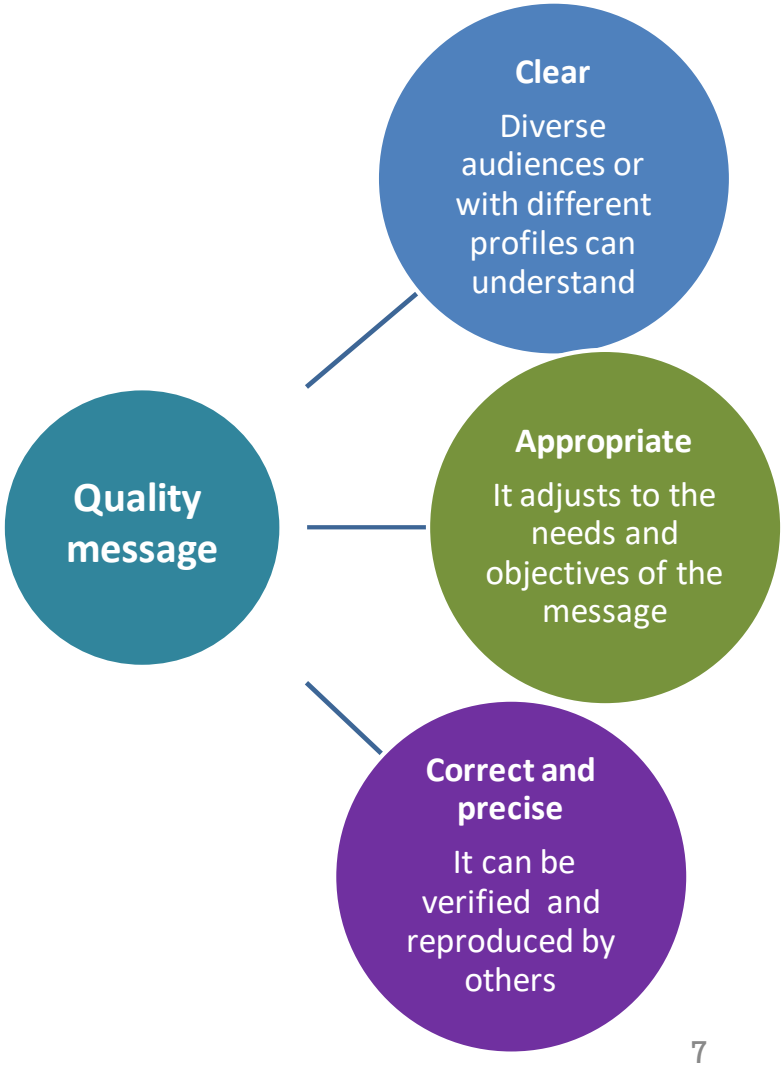

Figure 5

QUALITY DURING TECHNICAL COMMUNICATION

- The effectiveness of a written document is defined by a combination of very diverse factors: the reasoning, the exchange of information, the ethical criteria and the work in group.

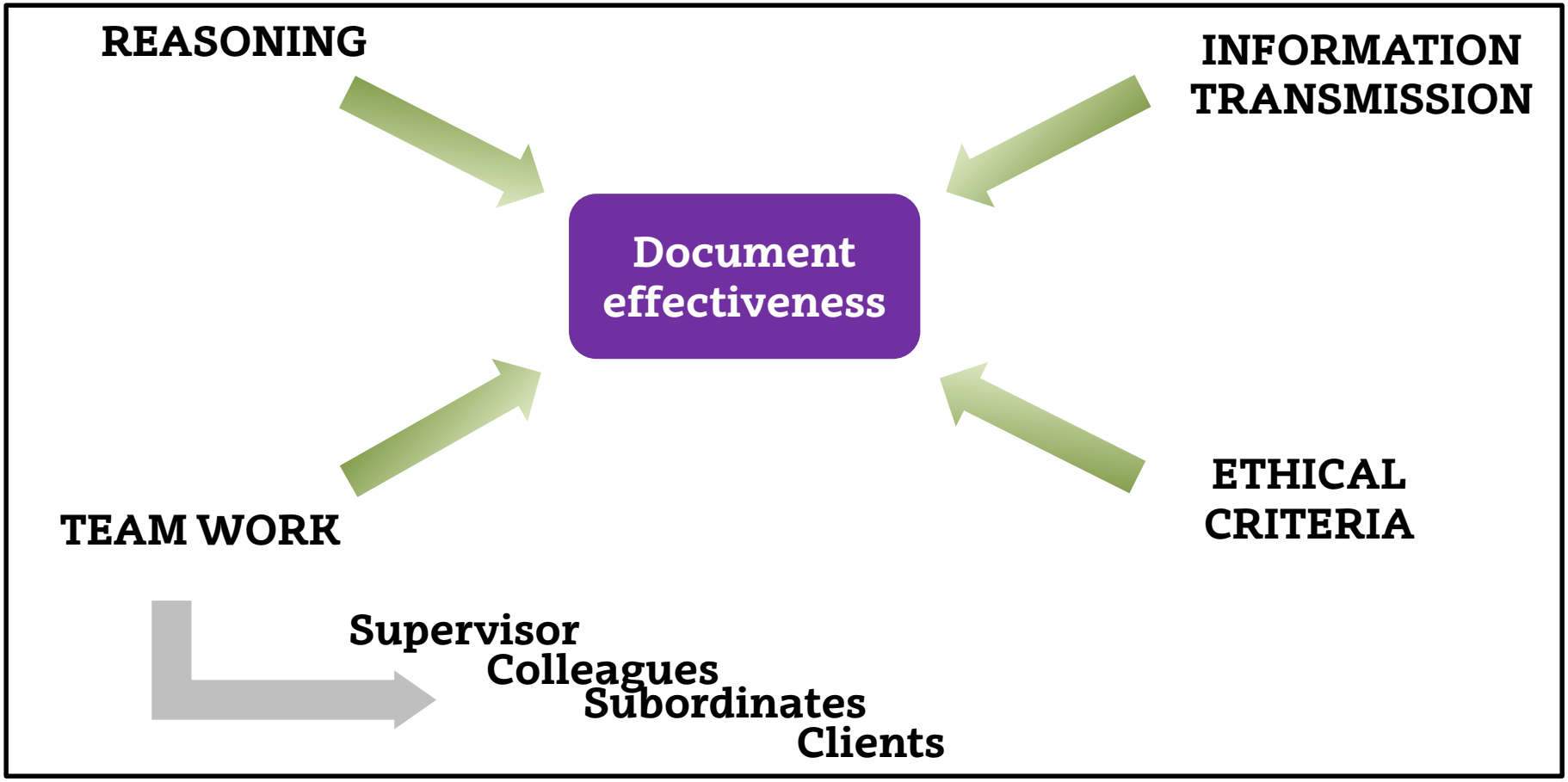

Figure 6

1.4 COMMUNICATION FORMAT

ACTIONS AND COMMUNICATION MEDIA

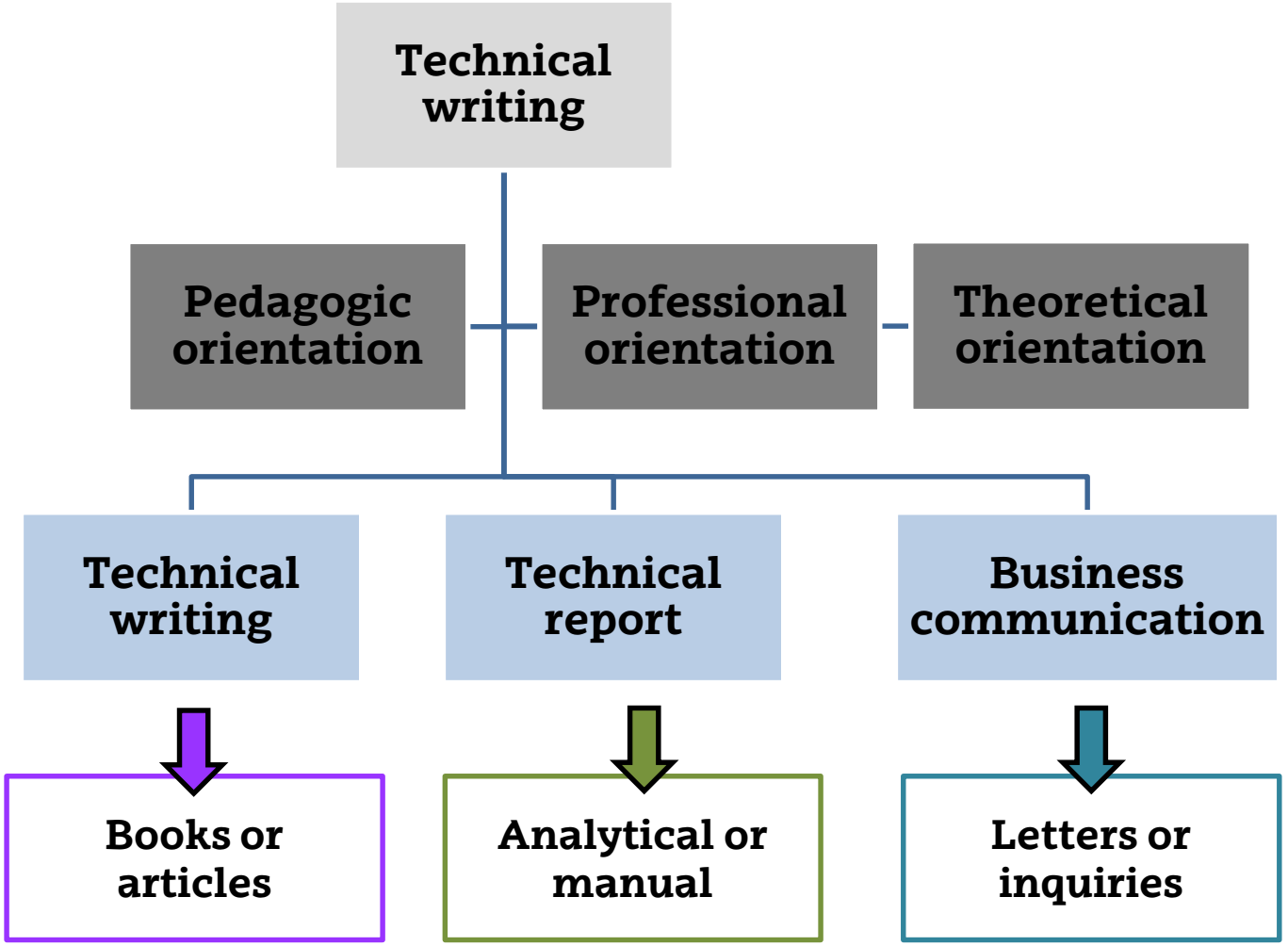

Figure 7

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