

Step of the technical document quality assesment.

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1 - Introduction

The development of our formation system takes every day in evidence the excellence of the book inside this system and therefore the necessity of the growth of the potential documentary.

In manner of contribution to this effort of formation, the objective of this study is to demonstrate by the slant of a quality assesment step of the technical document how the necessity to have quality of documents militates in favor of the formation.

The exam drives by the proposed step permits to judge the quality of documents that dresses three aspects [1]:

- the quality of production = realization according to rules of the art,
- the quality of conception = it is very make,
- the quality of conformity = it helps the waited well.

The interest carried to documents justifies itself by two facts [2]:

- it is a means of communication,
- it is a means of control of the good progress of a project.

The document is a means of communication

Following this first fact, the transmission of the communication puts in exergue the important role that plays the intelligibility of the document. Indeed, the reader's understanding depends on the informational quality of the document.

The process of communication by documents is composed of the coding of information (achieved by the editor) and of the decoding of the document (done by the reader). In other words, the circuit of communication is composed of [3]:

- *An emitter of information* that is the editor who describes a part of his knowledge on a domaine.
- *A receptor of information* that is the reader that must have a minimum of knowledge on the topic treated by the editor to be able to hang new information or to be practiced in the domain to which is connected the topic treated to be able to verify

informations.

- *The network of communication that is the language that must share the reader and the editor so that the communication is possible.*

The document is a means of control

The document is one of means permitting to control the good progress of a project. Indeed, the document permits to appreciate the realization of all project during all these life cycle phases.

Evidently, the content of the document can change a phase to another according to the importance granted to every life cycle phases of the project. Of this fact, the document can translate the evolution of the project and the degree of restraint of his good progress.

It is true that for the conduct of all project, the leadership of his stake has all interest to know methods of project conduct what requires to document themselves. Thus, the document is the support of basis of the conduct of all project and more especially at the time of the first phase of the conduct (phase of spreading) where the document must contain models (functional diagram, ...) as well as of other applicable information to the project (priorities and authorities tables, for example).

The content of synthtic documents must be put up to date all along progress of the project.

Thus, it is clear that the document is guarantor of the document quality that is, let's remind it, the satisfaction of the customer's needs. This satisfaction requires the restraint of the document qualtiy, the improvement of this quality or if the case arises, its maintenance in the time.

2 - Presentation of the step

The assessment of the document quality is bound to its content that varies a document to another.

To take to good this assesment procedure, it is necessary to adopt a step of assessment that permits to reach, in a first time, to the content of documents and to value him in a second time thanks to the pre - definite criterias.

The access to the content of documents, that corresponds to the first stage of the step, require the classification of documents according to the shape of the document and according to the domain treaty.

The second stage of the step of the document quality assesment is reserved to the actual assessment of the document.

These two stages are retailed below.

2.1 - Classification of documents

The classification of documents also takes places in two stages:

- *Classification in relation to domain traité* : this type of classification depends on the kind of recognized information. Indeed, the reader discriminates what reads from the totality of information carried by the document. This reading depends on the domain, of the acquired habits and of the recognition a priori of the structure of the document [4].
- *Classification in relation to the shape of documents*: this classification takes place according to the quality of document impression and, also, according to the quality of the information representation.

Following the aspect quality of document impression, that corresponds to the deterioration of the text quality because of its fashion of impression and its ageing, one does a semi - qualitative classification (figure 1).

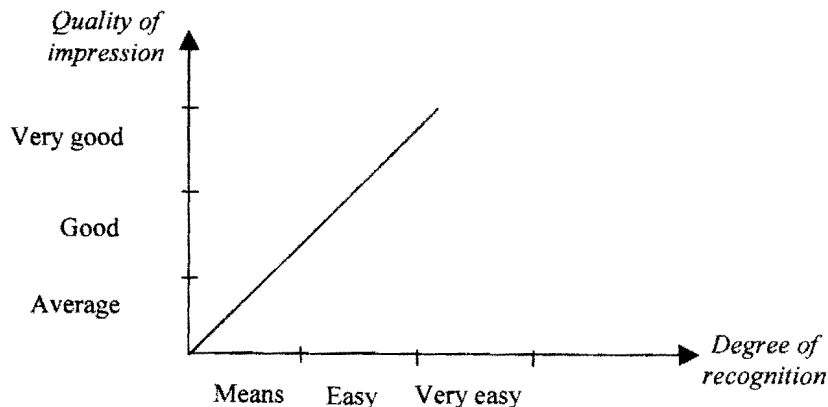


Figure 1 : Classification of documents in relation to the quality of impression.

In this figure we will put like general principles:

- the degree of recognition of information is middle for a quality of impression that is middle,
- the degree of recognition of information is easy for a quality of impression that is good,
- the degree of recognition of information is very easy for a quality of impression that is very good.

With regard to the aspect representation of information, the classification of documents must take in consideration the following shapes of representation:

- the text and the mathematical formulas,
- the simple or complex tables,
- the drawn graphs and photocopied.

The interest of the stage classification of documents is primordial since it facilitates the assessment of documents. This assessment will be the object of the following section.

2.2 - Assessment of documents

2.2.1 - Modelling

The step of assessment of the document quality includes criterias of assessment regrouped in two groups (figure 2):

- *relative criterias to documents*: resources of documents and documents actual (vertical axis),
- *relative criterias to the process of realization of documents*: cost and conditions of work (horizontal axis).

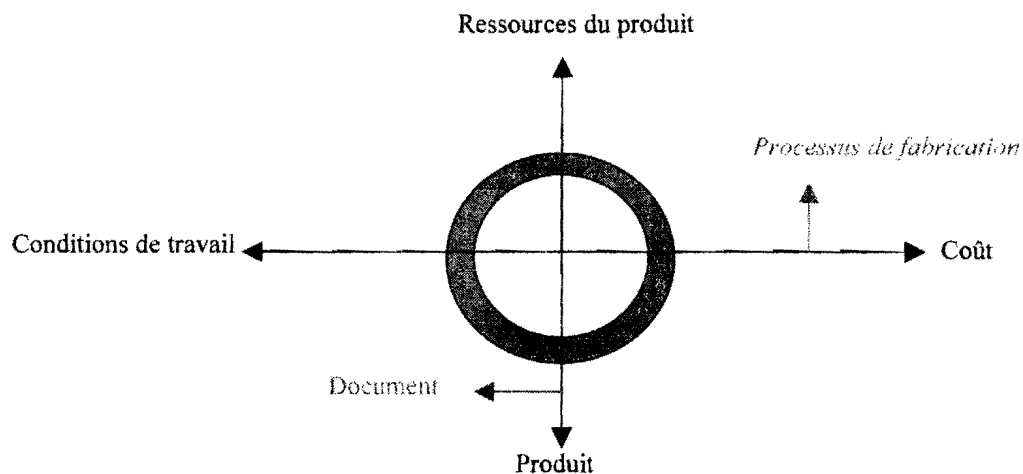


Figure 2 : Criterias of assessment of the document quality.

The goal of the model of the figure 2 consists in moving away of the point of intersection of axis to widen the quality of documents.

The continuation of this survey consists in defining some relative criterias to the vertical axis of the figure 2 as well as means of appreciation of these criterias.

2.2.2 - Criterias of assessment

Considering the type of the technical document assessment, criterias of analysis of this document type are attached very well to resources of documents (authors, experiences, used methods,...) either to documents actual and that have for objective, let's remind it, the satisfaction of the reader need.

Criteria kept for resources of documents and for a domain treaty are the number of authors, their experiences (productivity) and the number of bibliographic references.

Criteria kept for documents actual are:

- Use that depends on the simplicity, the clarity, the precision and the relevance of information.

The simplicity of the document is appreciated at the level of the shape and at the level of the content of the document. Indeed, less the used linguistic means are complex, more the degree of the understanding increases. The simplicity of the document is, therefore, sought-after in the formation of ideas that contains the content of the document.

However, the simplicity of the document must not be to detriment of the precision of information that contains the document. Because, imprecision harms to the understanding of information transmitted.

- Reliability that depends on the accurateness and the consistency of information. This criteria also concerns the content and the shape of the document.

Of the content one is interested at the level in the incompatibility of information.

Of the shape the interest is about the respect of rules of writing of the language in which is written the document at the level.

- By authentic document it is necessary to hear all resonant or written document to answer to a function of communication, information or real expression. A recorded excerpt, an original article, a scientific event narration... are some authentic documents [9 - 11].
- The output that depends on use and the reliability of documents.
- The respect of engineering rules that depends on the domain treaty as well as users of documents.

The set of the retained criterias, that concern the shape very well are the bottom of documents, is provided by the figure 3.

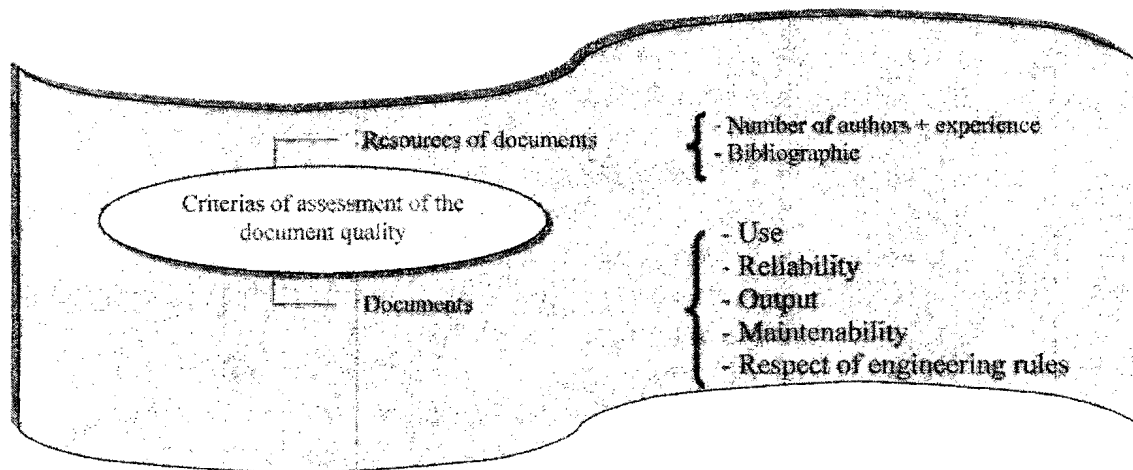


Figure 3 : criterias of document assessment

2.2.3- Means of appreciation

To the gleam of that that precedes it is easy to stop means of appreciation of these criterias.

Let's signal that means of appreciation have for objective to measure criterias (here, in a qualitative manner).

Criterias and means of appreciation of the document quality are regrouped in a matrix to two measurements.

An illustration, of this matrix, is provided by the table 1.

Criteria	Resources of documents	Document	
		Bottom	Contained
Authors	-Number -Experience		
Bibliographie	-Number -Diversity (books, papers,...)		
Use		- Simplicity of information - Good structuring of the document. - Use of figures, tables, ...	- Good structuring of the document. - Absence of the superfluous.
Reliability		- Incompatibility of information. - Absence of spelling mistakes	- Respect of rules of writing of the language of the document. - Absence logical contradiction

Table 1 : Means of appreciation of the technical document quality.

3- Conclusion

Findings that we can pull this analysis of documents are only partial.

Nevertheless, two leading lines clear themselves of the set of constatations:

- an evolution of the room of the scientific and technical document as means of communication,
- the role determining the document like means of control of the good progress of a project.

This survey presents the mind in which the step of assessment of the document quality has been conceived, its technical springs as well as its progress stage by stage.

This step is crowned by the survey of the documentary bottom of the Library of Health and Safety Department wich largely composed of engineers and magisters thesis.

This survey permitted us to measure the contribution of the step proposed on the appropriation process.

Finally, the presentation of this gait gives the opportunity to specify the necessity to call on the computer tool.

4 - Bibliography

- [1] Olsen, R.E., (1994), "Process Safety and Quality Management: how they fit together", Process Safety Progress, Volume 13 N°2, Birmingham, Angleterre, (pp 59-60).
- [2] Zurich Entreprises. (1998), " Management environnemental : systèmes d'application ", Risk Management Services, mois de janvier, Réf. 19-96, Zurich, Suisse.
- [3] Jackson, R.H., (1977), "Children, the environment and accidents", Edition Pitman Medical, Tunbridge, Angleterre.
- [4] Wildman, D.E., (1980), "The Elements of Product Safety Program", Document pédagogique. Université de New York, Etats-Unis.
- [5] PEDD- L'éco-consommation (Actions et instruments à mettre en œuvre 2000), Document Internet, Cahier 11 : le citoyen et l'environnement, Chapitre 2 : l'éco-consommation, France.
- [6] Chapouille, P., (1980), "Fiabilité-Maintenabilité ", T4300- Techniques de l'Ingénieur, France.
- [7] Schwokob, M et Peyrache, G., (1969), "Traité de fiabilité", Edition Masson, Paris, France.
- [8] Villemeur, A. (1988), "Sûreté de fonctionnement des systèmes ", Edition Eyrolles, France.
- [9] Calisson, R. & Coste, D. (1976), "Dictionnaire de didactique ", France.
- [10] Tourette, C. (1982), in Bulletin of psychology, France.
- [11] Mc Cormick, E. J. (1993), "Human factors in engineering and design " USA.