

## 22. e-AUTHORING IN TES

*This Module deals with the e-Authoring process from a strictly operational standpoint. Initially, the delivery interface is presented, describing each typology of frame (Template) that makes up a Module, starting however from the home page of the Course. The single components of the Module will be described, from a technical perspective: the Module itself to the Chapter, to the different typologies of the Paragraphs. Special chapters are dedicated to the technical description of the Multimedia Contributions, the In-depth Analyses and the Tests. The last chapter, the most important, will describe the electronic material that the author must "package": their typology, their organisation into files, file names, etc. The reader will realise the importance of these aspects that make the material comprehensible to the e-Editor and minimise the risk for errors in the passage from Content to eContent.*

### 22.1. The delivery environment of the eContent in TES

*The most complete platforms of e-Learning include specific environments for the production of eContent. Even the TES e-Learning Platform has that environment, named **Storyboard Manager**. The name derives from a development technique of "stories" used often in movies, especially in animation, and consists in realising sequences of pictures, sketches, etc. that represent the unfolding of the story itself. In the case of e-Learning the Storyboard is the sequence of pages that represents the Modules.*

*Through this environment, the e-Editor is capable of inserting the Content provided by the e-Author within predetermined schemes that represent the form of frames that will make up the Paragraphs. These forms are defined as **Templates**.*

*In this Chapter we will describe the Templates that are utilised by TES for the delivery of its Courses. These are some of the infinite examples of a template that can be realised, in compliance with the structural and technical ties of the TES e-Learning Platform, using the tools made available by the Platform. We would like to bring to the attention that the realisation of Templates is not made by the e-Editor, but by expert figures in Web development and Computer Graphics.*

#### 22.1.1. *The interface for delivering content: the Templates*

The interface for the delivery of content, which made up by the frame that is "read" and "studied" by the Trainee, takes on a paramount importance to foster not only learning, but also a positive and concerned approach to study. Generally, these interfaces are made up by various areas where a page is divided and by a series of "hot" buttons (both graphic and textual) capable of "guiding" the Trainee within the Course area. The structure of these pages is defined by training draftsmen designing the "form" and the components of all the **Page-Types** (or **TEMPLATES**) that make up the Courses. Obviously, the opportunity to build new forms is practically unending, being able to change colours, text arrangement, pictures, buttons, navigation criteria, etc.; but always in compliance with the structural ties determined by the platform that we may define as **Production Ties**.

There are varying structure typologies for eContent used among the TES Courses.

#### 22.1.2. *The Templates and production ties*

We have said that the Templates are realised by complying with the *methodological ties* used by the specific Distance Learning System and which in the Platform translates, in the end, into *structural ties* for the eContent. In the case of the TES system, the main ties that define the "guide lines" for the realisation of the Templates are the following:

- A TES Course is made up by Modules, subdivided into Chapters in turn divided into Paragraphs, all unnumbered.

- a Paragraph can be made up of a sequence of frames that are rigid both in the form and in the size of the texts, or by a single frame where the text is displayed using scroll bars
- there are special Chapters that contain Follow-up Tests
- The navigation Buttons within the Course area must be used so as to avoid as much as possible exiting of the Trainee from a Chapter before finishing. For this reason, forced use of the hypertexts is advised only in the In-depth analyses
- There are buttons that allow to “read” the pages of the Chapter in sequence and others that allow to go ahead from one page to another specific one by choosing from a list.

### 22.1.3. *The Course Cover Page Template*

The first frame of a Course is the **Cover page of the Course**. The form of this cover page is illustrated here on the side. As we can see, the page is divided into parts:

1. **Course Header Area** that contains the *Course Title*
2. **Module Listing Area** that contains the *Titles of the Course Modules*
3. **Course Description Area** that contains a brief *Description of the Course*
4. **Course Footer Area** that contains the buttons to *Go back to the Class* and to *Display a Guide to the Navigation Tools*)

### 22.1.4. *The Template of the Module Cover Page*

The second frame of a Course is the **Cover page of the Module**. The form of this cover page is shown on the side. Let’s see what parts make it up:

1. **Module Author Header Area** that contains the *Author Logo of the Module*
2. **Module Title Header Area** that contains the *Module Title*
3. **Course Button Header Area** that contains the hot word to *Go back to the Course Cover Page*)
4. **Chapter Listing Area** that contains the *Titles of the Module Chapters*
5. **Module Description Area** that contains a brief *Description of the Module*
6. **Course Footer Area** that contains the *Course Title* and the button to *Display a Guide to the Navigation Tools*)

### 22.1.5. *The Template of the Chapter Cover Page*

The third frame is the **Chapter Cover Page**. The form of this cover page is shown here on the side. The parts that make it up are the following:

1. **Module Author Header Area** that contains the *Author Logo of the Module*
2. **Chapter Title Header Area** that contains the *Title of the Chapter*
3. **Course/Module Buttons Header Area** that contains the hot words to *Go back to the Course Cover Page* and to *Go back to the Module Cover Page*)
4. **Paragraph Listing Area** that contains the *Chapter Paragraph Titles*
5. **Chapter Description Area** that contains a brief description of the *Chapter Description*
6. **Course Navigation Area** That contains a hot phrase to display the ‘*Hot List*’ of the *Course Modules Titles*
7. **Module Navigation Area** that contains a hot phrase to display the “hot” *Listing of the Module Chapters*
8. **Glossary Navigation Area** that contains the hot word to *Go to the Glossary Section* (special kind of In-depth Analyses)
9. **In-depth Navigation Area** that contains the hot word to *Go to the Module In-depth Analyses*
10. **Course Footer Area** that contains the *Course Title* and the button to *Display a Guide to the Navigation Tools*)

### 22.1.6. *The Paragraph Template*

The second frame of a Course is the **Module Cover Page**. The form of this cover page is shown here as follows. Let's take a close look at it:

1. **Module Author Header Area** that contains the *Module Author Logo*
2. **Paragraph title Header Area** that contains the *Paragraph Title*
3. **Chapter/Module/Course Header Buttons Area** that contains the hot words to *Go back to the Course Cover Page*, to *Go back to the Module Cover Page* and to *Go back to the Chapter Cover Page*)
4. **Multimedia Contributions Area** that contains the Multimedia Contributions associated with the Paragraph. This area is described in the next paragraph.
5. **Text Contribution Area** that contains the Paragraph text. Even this area has been described in the next chapter.
6. **Navigation Area** that contains hot words and phrases such as:
  - Display the "hot" *Listing of the Course Module Titles*
  - Display the "hot" *Listing of the Module chapter titles*
  - *Go to a Glossary Section*
  - *Go to the Module In-Depth Analyses*
7. **Navigation Area** that contains the *Scroll arrows in the Chapter*; these arrows allow to: "browse" (that is "*display in sequence*") the pages of the single Paragraphs of the Chapter or even *Go quickly to the Start or to the End of the Chapter*. The central button (square one) is used to *Display the Tiles Listing of the Paragraph*.
8. **Course Footer Area** that contains the *Course title* and the button for *Displaying a Guide of the Navigation Tools*)

### 22.1.7. *The Multimedia and Textual Contributions in the Paragraph Template*

In the page of a paragraph the left part of the central area is used for displaying the **Multimedia Contributions**. We will talk about this in a following Chapter. Now, let's focus on the multimedia contributions that are displayed in a page such as:

- a single picture
- a set of pictures
- a brief film or other type of media

In the case where multiple pictures must be displayed in a page, these must be called using Hot Words that must be inserted in the Textual Contribution. Practically every hot word/phrase in the text will allow to display a single picture of the set associated to that Paragraph.

The textual contribution will always be found in a "scrollable" area. This way the e-Authors will not have a too firm tie in developing the changes on texts provided by the authors to minimise, if necessary, the limits imposed.

## 22.2. **The Module**

*This Chapter will deal with describing the overall characteristics of a Module. The topic will be dealt with both from a methodological perspective as well as technical one. All the elements to design a TES Module will be provided.*

### 22.2.1. *General characteristics of a TES Module*

A TES Module is an independent unit of a Course. It carries out and uses up a certain topic. Obviously, it assumes certain entry knowledge/competencies, for which its independence from other possible Modules is, basically, of a structural and not functional kind. Basically, when a Module is developed three particular elements must be taken into consideration:

- The Content of a Module must be *self-consistent*, that is it must never refer to concepts which are assumed to be provided in previous Modules or referred to a clarification, an explanation, or a Module that is assumed to come later.
- The Module must *thoroughly* complete the topic treated

- The Content of the Module must *well balance* the use of text and other media

### 22.2.2. *The Module and Target*

When the Content of a Module is realised, the author cannot neglect the type of user to which the Module refers to. But generally, when the topics are of general nature, with specifics and defined technical components not strictly linked to knowledge, languages, particular jargons, these can be treated in a sufficiently clear manner for a more ample variety of target.

An Author must take into consideration, as much as possible, without, however, exaggerating in the objective of generalisation. The risk, in fact, was that of realising a muddled, pretentious Module that explains everything for fear that the user, having only a generic background, does not possess the right knowledge or competence necessary.

A good result is obtained if you take into account that the powerful set up of the Module into Chapters and Paragraphs simplifies the opportunity to specialise the Module for additional targets.

### 22.2.3. *The duration of the Training*

The Concept of **DURATION** in e-Learning is a very relative concept. For the very reason that e-Learning is a *telework practice*, it should be free from constraints of both space and time, for which a Trainee can use a Course in any place and in any time he desires. Obviously, the limits of this freedom derive from organisational issues. If, for example, the Trainee needs to participate in a Forum, a Videoconference, Chat with one's own tutors, one must also find time to be at an exact time on the computer.

Notwithstanding, it becomes necessary to define a minimal time of use of the Course content and, therefore, of the individual Modules that compose it, so it is clear to the Trainee how much time is left to dedicate to the training process.

### 22.2.4. *Usage conditions*

Many factors affect **USAGE TIME**, among which the following:

- Trainee's work plan
- Continuous time dedicated to usage
- Level of concentration
- Level of motivation

In order to carry out a measurement of time duration of a module it is necessary to make assumptions, and these will affect, obviously, the same development of eContent. A Trainee, in the ideal condition:

- *dedicates from one to two hours a day to training*
- *is capable of holding a session of one hour on the computer without distractions*
- *must always be knowledgeable of having reached, at the end of an activity, a certain knowledge*
- *is motivated in learning*
- *is constant*

### 22.2.5. *The duration of a Module*

If, therefore, we are in the ideal situation, taking into account the enormous imponderable situations and conditions, we can define the **Measurement of the Duration of a Module** as "*the minimum time that is necessary to the Trainee to use the content of the Module*". In addition to this time, the time used for all the in-depth analyses must be added for considerations, self-paced study, that the Trainee will dedicate to the usage activity to reach his own goals. This **additional time** can be calculated to be about **2 hours for every hour of a Module**.

This means that:

**1 hour of Module = 1 hour of eContent use + 2 hours of additional study**

#### 22.2.6. *The set up of a Module*

A **MODULE** must be equipped with:

A **Brief Description** of the Module, where the following is specified:

- The topic treated
- The competencies it allows to acquire.

This description must be **800-1000** characters at the max. (without counting the spaces between words).

The **listing of the Chapters** that make it up:

- The Chapters must be numbered in sequence putting the Module Number ahead of the Chapter Number
- The number of the Chapters must be between **5** and **20**.

The numbering of the Modules, of the Chapters, of the Paragraphs, that in the documents that contain the Content are associated to the Chapters, are only functional to the managing of the relations among textual contributions and multimedia contributions. **The only clear manner of connecting text and media is that of numbering the paragraphs and, therefore, the chapters.**

This numbering will not appear in the frames of use.

Therefore, the **Chapter Number** will be made up by:

**<module number>.<chapter number>.**

**The Number of the Module is provided to the e-Author by the training leader.**

### 22.3. The Chapter

*We will describe the general characteristics of a Chapter. The topic will be treated both from a methodological as well as technical viewpoint.*

#### 22.3.1. *General characteristics of a Chapter*

A **Chapter in TES** is a unitary component of a Module. Since, as we will soon see, a Chapter should be completely used in an individual session on the Computer (leaving aside any possible in-depth analyses), it must develop thoroughly a specific theme of the Module. Since the Chapters of a Module are necessarily interconnected among themselves, the technique of referring an explanation to a subsequent Chapter or refer an explanation given in another chapter, can be used.

#### 22.3.2. *Duration of a Chapter*

The **Duration of a Chapter** is usually defined by the Distance Learning standards. Many studies, both of psychological as well as behavioural nature have demonstrated that, other factors equal, one of the elements that affect the level of attention in the learning process on the Computer is fatigue.

Usually, those processes requiring an uninterrupted session lasting between 30' and 1h 30' are well tolerated.

This means that a chapter should have a duration falling into this time interval.

In TES **a Chapter should have an average duration of 1h.**

This rule will affect the development modalities of the paragraphs.

#### 22.3.3. *Chapter set up*

A **CHAPTER** must be equipped with:

A **Brief Description** of the Chapter, where the following is specified:

- The subject treated in the Chapter
- The goal of the Chapter

This description must be of **500-900** characters at the most (not counting the spaces between words).

The **list of Paragraphs** that make up the following:

- The Paragraphs must be numbered.
- The Number of Paragraphs must be included usually between **5** and **15**.

Even for the numbering of the paragraphs the same rules apply as in the previous chapter. The paragraphs must be numbered sequentially within the chapter and must bear, in the numeration, both the indication of the Chapter as well as the Module where it belongs.

Therefore, the **Paragraph Number** will be made up by:

**<module number>.<chapter number>.<paragraph number>**.

## 22.4. The Paragraph

*The Paragraph is the most important part of a Module, since it is that which “contains” the Content. In this chapter all the parts are illustrated that make up a paragraph. The technical and methodological characteristics are provided that allow developing the paragraphs. Some more specific aspects, such as the Multimedia Contributions, that also deal with the paragraph, are dealt with in a later chapter.*

### 22.4.1. *What is a Paragraph*

The **PARAGRAPH** is the smallest part of a Module. It corresponds to one or more frames according to the type of Template that is used. In TES, a paragraph can be made up:

- of **multiple frames** where the textual contribution is strictly fixed in size (so as to be displayed in the space of the page assigned to the text, which is not provided with scroll bar)
- of **a single frame** where the text is displayed in a Window provided with a Scroll Bar.

The second solution will be chosen in these lessons since we believe it to be more effective from many standpoints, especially that of greater ease, for the e-Editor, to insert the Content into the environment using the **TES Storyboard Manager**.

Therefore a paragraph will be a unitary part - no longer subdivided - of Content.

### 22.4.2. *The duration of a Paragraph*

The **DURATION OF A PARAGRAPH** represents the **Usage Time** of the paragraph itself. This “time” is very variable, in relation to

- the complexity of the subject dealt with in the Paragraph,
- the number of Multimedia Contributions
- the presence of suggestions for in-depth analysis.

If we hypothesise that the Paragraph does not show “hops” out of the frame (for example **Link to Sites** directly inserted into the text or invitations to go directly to **Study In-depth Analysis**), the duration of a Paragraph may be determined by the number of Paragraphs that make up a Chapter.

Since the duration of a Chapter must be included between **0.5 and 1.5 hours** and since a Chapter should be formed by a number of Paragraphs included between **5 and 15 Paragraphs**, thus.

**a Paragraph must be used in an average time of 6 minutes.**

### 22.4.3. *The structure of a Paragraph*

A **PARAGRAPH** must be made up of:

A **Title** that will represent the Paragraph in all the lists and in the head of its frame. This title must not be too long to allow it to be easily displayed in the lists.

A **maximum length of 75 characters** is required for the blank spaces.

A number must be associated with the title in order to define the connections among it and all its associated elements (Multimedia Contributions, In-depth

analyses, etc.). **This number will not displayed in the frames and in the lists.**

The **Paragraph Number** will be made up of:

**<module number>.<chapter number>.<paragraph number>**

where **<paragraph number>** will be a progressive number within the Chapter.

A **Textual contribution** that fully handles the subject matter.

The size of the text must be approx. **800-1000** characters at the most (not counting the spaces between words).

**A Multimedia contribution.**

This can be made up, for an individual paragraph, by:

- A picture
- A series of pictures
- An animation
- a film (brief)

A mixture of the following is also possible, for example: pictures and animations/brief films.

Any Multimedia contribution must have a size of (widthxheight) **450x480** pixels.

#### 22.4.4. *The textual part of a Paragraph*

We have seen how a Paragraph must include a specific **TEXTUAL PART**. We have seen the sizes, but we must take time to consider on how the content is presented. The opportunity to work in a multimedia and hypertextual environment may suggest to *insert within a text certain **hot words** that entail a hop out of the frame* that contains that text. But the text standard suggests to **not insert this type of hop**. Let's see why.

In the TES Platform Standard of e-Learning a Chapter is considered over when the Trainee, starting from the first frame (that is from the first Paragraph) reaches the last frame (last Paragraph). In addition, the system "records" all the dynamics of the usage of the Trainee (display time for each frame, sequence of all the frames "read", even if the movement is not sequential rather, it is "random" or characterised by numerous routes backwards also, overall usage of the Chapter, etc.). Any "forced dropping" of a Paragraph would block from recording this process and would render the usage dynamic analysis by the Trainee less significant.

For this reason it is preferred, within the ambit of the Paragraphs, to provide the Trainee with indications on how to **deepen the subject matter treated after having ended the Chapter**, referring to specific **In-depth analyses** associated with the Module.

This does away with resorting to "hops" outside of the Paragraph and therefore of the Chapter.

#### 22.4.5. *The Multimedia Contribution for a Paragraph*

Multimedia Contributions represent an indispensable support to the transmission of knowledge. Every Paragraph must always be accompanied by at least one picture. In the next Chapter we will look further into this aspect

#### 22.4.6. *The Localisation of the Content*

The **LOCALISATION OF ECCONTENT** represents a great problem for e-Learning. In general, **to Localise a Content in Network means making it available to users from different cultures and languages**. In the case of e-Learning, this aspect takes on a focal meaning since in Distance Learning there can be no misjudgements or misunderstandings by the Trainees in respects to how much they must learn. For this reason, the providers of e-Learning that must localise it into other languages, should pay much attention to using subjects and examples that are not strictly tied to their own culture or mother tongue. For certain areas of knowledge this is more

easily achievable. Especially when the topics cross over (for example technological and scientific topics). **When the topic poses greater risks of not being immediately translatable, the e-Author must pay more attention to how the topics are treated and even be capable of controlling the Content localised in other languages.**

## 22.5. Multimedia Contributions

*Multimedia Contributions are those communications represented under different form from pure text. In e-Learning Multimedia Contributions take on a focal importance, for this reason in the present Chapter we will deal with their methodological and communicative significance, as well as the realisation techniques and association to the textual parts.*

### 22.5.1. *The role of Multimedia Contribution*

e-Learning is achieved within a very specific technical-communicative context where textual communication is only one of the different representation techniques of the content. These techniques are indicated with the generic term of **MEDIA**, term that indicates both the form of communication and the means. Thus:

- text-media
- pictures-media
- sound-media
- video-media

**Hypertext system** (link between media-text) and **Hypermedia system** (link among various media) represent the greater size for the transfer of knowledge. And therefore almost a “categorical requirement” of Kantian memory, that of associating always different media in the frames.

This is translated into the **TES Methodology** of development of the eContent for e-Learning, in identifying, by the e-Authors, for each Paragraph:

- a textual part
- a multimedia part

The Multimedia Contribution can be inserted to

- **exemplify**
- **emphasise**
- **amplify**
- **analyse**
- **support**

one or more concepts expressed in the textual part of a Paragraph.

### 22.5.2. *The Picture*

There are various types of PICTURES that the e-Author can associate to a text. The more important ones are the following:

- a **drawing**
- a **graphic representation**
- a **map**
- a **chart**
- a **diagram**
- a **photograph**

### 22.5.3. *Sizes of the Pictures and resizing*

As already stated, a picture must take up a space equivalent to **450x480 pixels**. This tie stems from the sizes assigned, in the Template to a Paragraph, to the area of the Multimedia Contribution.

If the picture you have is smaller or larger than the allowed sizes, you must proceed to its **proportional resizing** (to avoid “distortions”).

This type of resizing will not always return a picture to the required sizes.

For this reason the technique of inserting the picture into a new picture must be used, made up only by a background, possibly of “white” colour, of correct sizes

(450x480). We will name this picture-background **Container picture**. In this way the resulting picture will be correctly sized.

Obviously, if the start picture is larger than the possible one, the resizing should allow for the **presence of a white border (or of the desired colour for the background)**.

If the start picture is smaller, you can decide whether or not to resize, but in any case you must always consider a white border (or of the desired colour for the background of the container picture).

#### 22.5.4. *The collection of Pictures*

When the text of a paragraph has more pictures attached to it, the author must insert into the text hot “words” or “expressions” that are needed to refer the picture in the area. This way all the pictures that are associated to a single paragraph may be displayed. We have seen this technique used many times in this Module.

#### 22.5.5. *Brief Films and Animations*

Brief films and animations are displayed in the same area of the pictures. The size of the window of the film/animation must be at the most 450x480 pixels (as with the pictures).

Great attention must be given to the insertion of brief films/animations among the Content, since this type of media has usually a very high size in bytes, for this reason it becomes hard for the Trainee to wait till the film/animation has loaded in order to view it. Usually, it makes sense to have a size in bytes of **max 200 KBytes**.

#### 22.5.6. *Lack of specific Multimedia Contributions for a Paragraph*

When you don't have a specific picture available to attach to a paragraph, a “trick” can be used that can allow filling in the picture area on the left of the screen. The following “tricks” are possible:

- Insert a **fantasy drawing** (that can be inserted in all the pages where a specific picture does not exist)
- Insert a more or less brief text under the form of a picture (that is the text will be written with a graphic software to allow a picture); this text (that must in any case be attached to the topic of the paragraph) could be, for example:
  - o **a saying,**
  - o **a summary,**
  - o **a famous quote,**
  - o **an extrapolation of the explained concept,**
  - o **a methodological indication,**
  - o **a brief further explanation**
  - o **an example**

#### 22.5.7. *The Localisation of the Multimedia Contributions*

In the case of Multimedia contributions the problem of Localisation is, generally, a technical problem. In fact, if the picture contains writing in the mother tongue of the e-Author, these can be localised, without having to work hard from the graphic point of view on the picture, only if those pictures are “structurally separate”.

This separation can be obtained only with the graphic software that call for the “level” building of the picture (such as Adobe PHOTOSHOP and Macromedia FREEHAND). In these environments various components can be inserted of a picture using a level for each component. At the end of the realisation the picture must be saved in the original format, both in a “light” format to be used on line (.jpg or .gif are recommended). When it is saved in the “light” format the levels are “joined” for which the picture is no longer easily changeable, but having the original version, you can act on that easily to translate the textual parts.

Obviously, this facilitation can not be obtained if not with pictures that have been realised following this technique. For all the others the localisation must be carried out with support techniques (“legends”, direct intervention on the “light” pictures). If the localisation is difficult you will have to resort to the legends (translations provided in the text).

## 22.6. In-depth Analyses

*Analyses are a basic element in e-Learning. It allows to significantly broaden the knowledge and content delivered through the Module's frames. And, furthermore, without the ties determined by the delivery environments. In this Chapter we will describe the In-depth analyses both from a methodological perspective as well as technical one. A specific treatise will be made for the analyses made up by web sites on the network.*

### 22.6.1. *What is In-depth Analysis*

We have often emphasised how important it is to comply with, in the production of eContent for e-Learning, the ties defined by the standards of delivery/usage of the content. We have also emphasised the benefits of having specific standards in an e-Learning Platform and we have underlined the significance of the ties defined by the TES e-Learning Platform.

Obviously, the opportunity to enrich the set of standard content is fundamental to make the study and learning richer and more structured. In addition it is not always possible to provide all the content useful to learning within the frames of delivery.

For all these reasons, the TES e-Learning Platform calls for the use of in-depth analysis of the content (which we will always call **In-depth** if this will not cause confusion) that are associated to the individual Modules, and therefore to the Courses to which these Modules belong to.

### 22.6.2. *Typologies of In-depth Analyses*

The analyses in e-Learning can be of various types according to the methodologies and choices made by the authors. These in-depth analyses could, in theory, not be directly provided by the Platform (for example, the advice of reading of certain text or a certain multimedia product).

We consider in this Module only the analyses that are directly deliverable by the Platform.

These analyses are always documents of different typology. Among these however there is a special case for the analyses made up by Web Sites.

For this reason, we will distinguish formally between the analyses by the authors in the two categories:

- **Documentary analyses**
- **In-depth analyses on the network**
- **The Glossary**

### 22.6.3. *Documentary analyses*

A **DOCUMENTARY ANALYSIS** can be:

- a **handout**
- a **manual**
- a **deed**
- a **collection of exercises**
- an **application**
- a **case study**
- a **bibliography**

From a technical perspective a documentary analysis will be a file document in a **rtf** or **pdf** format. The latter form is preferable to avoid modification and copying of documents (even of parts) and in the case the originating documents are realised

with non-standard word-processors. If a pdf type document is used everything must be done to have the rtf format also available for the problem of its localisation.

#### 22.6.4. *In-depth analyses on the network: Links to Sites*

The **LINKS ON THE NETWORK** represent a special type of analysis. Access to sites on the networks is useful every time they can provide significant analysis in relation to the content delivered.

All the links relative to the Module must be collected in a specific **rtf** document where they must be presented in a motivated manner and are connected to the different topics treated in the Paragraphs to which these links refer to.

For this matter, the **collection of links** must have these characteristics:

- be **motivated**, in the sense that every link or group of links that are inserted in this document must show why they have been chosen and what the user must look for in those sites
- be **descriptive**, that is every link must have a brief explanation of the site it is connecting to
- **pleasant**, in its presentation.

In order to attain these results the Links of a Module must be presented grouping them by topic and by goal of in-depth analysis. In this manner the Trainee will feel led in accessing these sites, knowing clearly what to look for and why.

Since the **LIBRARY** section of the delivery Platform is connected to a single Course and since a Module can be common to more than one course, the name of the document of In-depth analysis that contains the links must have a reference point to the Module it is attached to. In this manner if different Modules of the Course each have a link document, these will be distinguished exactly by the name of the Module.

#### 22.6.5. *The Glossary*

The **GLOSSARY** represents a useful tool of in-depth analysis and allows providing, for one or more terms in the Module, a brief description. The Glossary is made up by **Words** or **Codes** and connects each term to its brief description.

The description must be max **200 characters** (spaces included).

In order to realise the Module Glossary a **rtf** document must be used that contains a simple two column chart. Each row of this chart will have in the left column the term and in the right column its definition.

This document does not become an In-depth analysis to download from the platform, but a special frame.

#### 22.6.6. *Use of the Analyses*

The use of the Analyses must be managed within the frames of the individual Paragraphs. Each analysis to be effective must be indicated to the Trainee within the textual or multimedia contribution of one or more Paragraphs, with the motivation and explanation of the function of the analysis itself.

Therefore, in the text (or in the picture) of a paragraph that has an associated In-depth analysis, you must invite the Trainee to go “read” or “use” the specific analysis.

In relation to the Analysis on the Network, you must pay attention and indicate, to the Trainee in the frame of the paragraph, the exact name of the Link to visit (it must be identical to the one inserted in the relative Collection of Links, so as to not confuse the Trainee).

## 22.7. The Tests

*Goal of this chapter is that of analysing the foreseen techniques by TES for the production of tests. In an e-Learning process, the delivering of Tests represents a fundamental time for the Trainee and for the Training Management System. In fact, through Tests the Trainee can take into consideration what he/she has learned and the Training leader can obtain precious information on the levels of learning achieved.*

### 22.7.1. *What is a Test*

A **TEST** is a set of one or more tools capable of measuring the level of competence and knowledge reached by the Trainee. Obviously, Tests do not represent the only tool for this follow-up; other types of follow-up can be developed, for example, oral interviews “in person”, but tests are the ideal tool for Distance Learning.

### 22.7.2. *The typologies of Tests*

Tests are identified in various typologies. They are made up by parts called **Items** that can be of various nature. The main types of Items are:

- the **Multiple Choice Quiz**
- the **Open Problem**
- the **Brief Essay**
- the **Quasi-open problem**

The **Multiple Choice Quiz** represents the main typology of Item and that which is better used for an automatic assessment by the e-Learning Platform. We will describe this type of quiz in the next paragraph.

The **Open Problem** is an Item where a *problem situation* is presented and the Trainee is urged to give the answer in writing.

The **Brief Essay** is similar to the Open Problem but the Trainee has limits to the length of the answer (maximum number of words, limited physical space for the writing of the answer, etc.).

The **Quasi-open Problem** is a problem situation whose answer consists in *completing* a text, a formula, a phrase. This type of item is used very often in tests relative to foreign languages.

### 22.7.3. *The Tests in TES: Multiple choice Items*

Due to a methodological and organisational choice, in the first set up of the TES system we have decided to realise Tests made up of only Multiple choice Items, for the obvious reason, as stated, that these are the only type of items that allow an objective measuring of performance.

### 22.7.4. *Features of the Multiple Choice Items*

A Multiple Choice Item is made up by two parts:

- a problem part, where the situation is placed and in relation to which the answers are given
- a part of answers where a series of answers are given, only one of which is correct.

The problem part can be of three types:

- textual
- graphic
- textual and graphic

The **number of answers** presented must be such as to discourage a casual answer. A right number is **4**.

The answers must be conceptually, textually, expressively similar among themselves, so that the person answering is not advantaged or misled by a reply different from the other (as in **example 1**).

All answers must be plausible. It is not correct to use, among the answers, an answer that is completely odd (as in **example 2**), since all the wrong answers are assessed in the same manner.

Only one answer must be exact among all the answers. Another must be very close to the right one; it is called **distracter** (see **example 3**).

## 22.8. How to “package” Content in TES

*This last Chapter represents the “Instructions for use” of everything we have highlighted up till now. The Chapter provides all the practical rules to record the Content produced by the e-Authors. These rules regard not only the specific editing of the content, both textual and multimedia, but also all the rules for collecting the electronic files as well as assigning the names to all the files. A series of In-depth analyses are connected to this Chapter and represent as many examples of what will be said.*

### 22.8.1. *The documentation of the Content of a Module*

The realisation of Module Content entails preparing the following products:

1. a Word document in **rtf** format that contains all the **Textual contribution of the Module**
2. The files of the pictures and other **Multimedia Contributions** associated with the text
3. a Word document in **rtf** format or an Acrobat document in **pdf** format for each **Documentary Analysis** associated to the Module
4. a Word document in **rtf** format for the **Analyses on the network**
5. a Word document in **rtf** format containing the **Glossary** associated with the Module

The last three documents are not mandatory, they may not be there.

Everything herewith listed is illustrated in the following paragraphs, while the In-depth analyses contain example files.

**In order to effectively exemplify the “instructions for use” that are provided in this Chapter, the present Module will be used. Basically we will illustrate how the content of a Module is prepared providing all the material that have been prepared for this Module!**

### 22.8.2. *File names and e-Editing*

Before providing “Instructions for use”, we want to underline the importance that in the “rules” will be given for the assigning of names to all the files produced. These names are the only tool that allows the e-Editor to transform the Content into eContent (using the StoryBoard Manager of the e-Learning TES Platform) without risking mistakes.

These names allow, in the case of Multimedia Contributions, to recognise immediately which paragraph a certain Contribution belongs to.

### 22.8.3. *The editing of Textual Contributions*

For the editing of the Textual contributions a Document must be used where these are structured into Chapters and Paragraphs, corresponding to the Chapters and to the paragraphs of the frames. In addition, the descriptions of the goals and content for the entire Module and for the single Chapters will have to be inserted.

The Word document is inserted into the In-depth analyses

**“TES-Content-22-Text”**

that contains all the Textual Contribution of the Module in the form required by the **TES Development Methodology for eContent**.

### 22.8.4. *Use of the Styles and Colours in the Textual Contributions*

As can be seen, the use of styles in the textual contributions of the frames are pretty much limited. This makes the communication clearer and does not burden the reading of the text. The following writing rules, in a single frame, should always be followed:

- limit the presence of words or expressions in UPPER CASE

- limit the presence of words or expressions in **bold**
- limit the presence of words or expressions in **bold underlined**
- limit as much as possible the use of different styles all together: **bold**, **bold underlined**, **bold underlined-italic**, etc.

In the use of colours for words or phrases the following rules must be followed:

- for hot words and expressions that refer various Pictures or other Multimedia Contributions associated with a single Paragraph use the **colour blue and the Bold style**
- for hot words and phrases that represent the names of Documentary analyses or Analyses on the network use the **colour green and the Bold style**
- for words or expressions that represent concepts to emphasise use the **colour Red** and, possibly, **the Bold style**.

#### 22.8.5. *The assigning of File Names to the Textual Contributions*

The name to assign to the file that contains the Textual Contribution must be set up as follows:

**TES-Content-<Module Number>-Text**

Where, in the place of **<Module Number>** we will have the Number that has been assigned to the Module and notified to the e-Authors.

For example, for the Textual Contribution document for this Module, taken from the analyses, the following name has been assigned:

**“TES-Content-22-Text”**

because **22** is the Number attributed to the Module and that has been notified to the e-Author of the Module. The colour is green because it refers to the document inserted into the Documentary Analyses of the Module.

#### 22.8.6. *The editing of Pictures*

We have already seen how the realisation of the pictures that make up a part of the multimedia contribution of a Module is done. The rules we need to follow are the following:

- the **standard size** of each picture must be **450x480 pixels**
- the **format** must be **jpg or gif or png**

In respects to the realisation of the pictures we must follow the rule that favours the **linguistic localisation**; therefore, for those pictures that contain words or expressions in a certain language the picture must be prepared with a software that allows handling the levels (such as Adobe PHOTOSHOP or Macromedia FREEHAND) and save them both in the native format of the environment as well as in jpg or gif format.

Obviously, if the picture is a photo or picture not on level, even if it contains textual expressions, it will have to be provided as is!

For pictures that are of a different size from the standard one, proceed as follows:

- if the **picture is very small** you must enlarge it to bring it to a size very close to the standard one, maintaining the proportions (to avoid distortions), but only if the result does not jeopardise the quality of the picture itself, in this case you must leave it in its original form
- if the picture is larger you must reduce it bringing it to a size very close to the standard one, leaving the proportions alone (to avoid distortions), but only if the result does not jeopardise the quality of the picture

In both cases **the resized picture must be inserted into an empty picture of standard sizes where only one background is found** (possibly of **white colour**, but this is not mandatory).

### 22.8.7. *Assigning names to the Picture Files*

The rules for determining the File names to the Picture Files are two, because there are two distinct cases:

- if the **picture is the only one for a certain paragraph**, the following set up must be used for the file name of this single picture of the Paragraph:

**“TES-Content-Pic-<Paragraph number>”**

- if the **picture is one of a set of pictures associated to a certain paragraph**, the following set up must be used for the file name of each picture of the Paragraph:

**“TES-Content-Pic-<Paragraph number>-<Progressive number>”**

in both cases

**<Paragraph number>**

represents the number of the Paragraph to which the picture or the pictures are associated with; let's remember that this number is made up by:

**<Module Number>.<Chapter Number>.<Paragraph Number>**

While in the second case

**<Paragraph Number>**

represents the progressive Number of reference of each of the group pictures that are associated with the Paragraph. This number must indicate the order of the association of the pictures with the hot words or expressions present in the Paragraph.

That way, for example, if Paragraph 22.4.5 contains three hot words /expressions to which three pictures are associated with, these will be named in the order in which the hot words/expressions are inserted into the text of the Paragraph as follows:

**“TES-Content-Pic-22.4.5-1”**

**“TES-Content-Pic-22.4.5-2”**

**“TES-Content-Pic-22.4.5-3”**

### 22.8.8. *The editing of other media*

The editing rules of other media is similar to that presented for the pictures. We consider other possible media basically brief films/animations and sound pieces. Both must be displayed in a window of max **450x480 pixel**.

Obviously, we know that brief films usually have very large sizes for which reason their use is allowed only if their “weight” in bytes is limited (**max 150/200 Kb**). For animations, especially Flash ones (or similar programmes), the matter is different since these media are generally very “light”.

In the case of sound contributions the same position for films applies.

A file that contains a brief film/animation must have a name in the following format:

**“TES-Content-Mov-<Paragraph Number >”**

A file containing a sound contribution (spoken, sound, etc.) must have a name in the following format:

**“TES-Content-Sou-<Paragraph Number>”**

### 22.8.9. *The editing of the Documentary analyses*

The **Documentary analyses** are represented, as we have already seen, by documents that the User can download from the Platform (or directly read without downloading).

In order to ensure a minimum of “Copyright protection”, we advise to realise these documents in **.pdf** format.

This choice, since the Adobe ACROBAT format is an international standard, allows not to worry about the aspects linked to the native format of the documents themselves, that may have been created with different versions of Word (or with other word processors) not belonging to all the Trainees. In any event, Word documents must be saved in **rtf** format to avoid incompatibility among the different releases of the word-processor.

The name of the files of the Documentary analyses (since these are attached to a Module) can be “freer” of that of other files. For ease of use we recommend using, as a file name, the same one that is indicated in the Paragraphs and pointed out to the Trainee. This means, use file names that have a real meaning and therefore more easily understandable by the Trainee in the **LIBRARY** of the TES e-Learning Platform.

For example, you can download, within this Module, the In-depth analyses:

“**TES eContent Production – Instructions for use**”

that contains a summary of all the rules that are provided in the Chapter.

The name of the file that contains it is:

“**TES eContent Production – Instructions for use.pdf**”

#### 22.8.10. *The editing of the Analyses on the network*

Even for the Analyses on the network a document that contains all the suggested links must be used. This document will be used by the e-Editor to insert into the e-Learning TES Platform LIBRARY every **web address** with its **description** and the **reason for its access**.

These Web addresses will be those that the author aims at showing to the Trainee in the Paragraphs, through the use of phrases that entice the Trainee to go to these sites, fully described, upon completion of the chapter study for a specific goal.

At the end of the study of the chapter visit the site [www.liberliber.it](http://www.liberliber.it), represents the site of the producers of electronic text of famous works to verify, as in this case, how eContent is built.

The file containing the Analyses on the network will have to be in **.rtf** format and its **Name** must be of the following type:

**TES-Content-<Module Number>-DeepNet**

In the case of this Module, the associated file is:

**TES-Content-22-DeepNet.rtf**

#### 22.8.11. *The editing of the Glossary*

The **Glossary Document** is made up by a chart where every row has a **term** and its **explanation**.

The file containing the Module glossary will have to be in **.rtf** format and its **Name** must be of the following type:

**TES-Content-<Module Number>-Glossary**

In the case of this Module, the associated file is:

**TES-Content-22-Glossary.rtf**

#### 22.8.12. *The editing of the Test*

The **Test Document** will hold the collection of Multiple Choice Items. The number of Items to realise is strictly linked to the number of Paragraphs that make up the Module.

We suggest to insert **an Item for each Paragraph** and, in any case, **not less than 5 Items per Chapter**.

The Items will be numbered progressively starting from 1, with no distinction whatsoever. Therefore, if a Module is associated with a test with 30 Multiple choice Items, these will have to be numbered **1 to 30**.

The file containing the Module Test will have to be in the **.rtf** format and its **Name** must be of the type:

**TES-Content-<Module Number>-Test**

In the case of this Module the following file has been realised

**TES-Content-22-Test.rtf**

Which can be downloaded as an Analysis.

As we have seen previously, the test of a Module is its final Chapter. As such it is made up of a sequence of frames, each of which will contain an Item and it is similar to a Paragraph.

If the Items contain pictures, you must collect these materials in the same manner shown for the multimedia Contributions of the Paragraphs. Even for the names the same rules will apply for the Pictures of the Multimedia Contributions of the Chapters.

For which, as an example, the name:

**“TES-Content-Pic-22.Test.5”**

will be assigned to the picture of Item number 5 of the Module 22 Test. While for the names

**“TES-Content-Pic-22.Test.13-1”**

**“TES-Content-Pic-22.Test.13-2”**

**“TES-Content-Pic-22.Test.13-3”**

**“TES-Content-Pic-22.Test.13-4”**

four pictures will be indicated associated to Item n. 13 of Module 22.