DRAFT

MATRIX FOR CREATING TRAINING COURSES: CLASSROOM, E/B-LEARNING

Index

The matrix for any kind of course is:

- A benchmark of quality;

- A reference for the technical and educational activities;

- A set of requirements or conditions that determine the quality of practice.

This document is organized through multiple chapters: the first four are related to the theoretical framework of any kind of course (classroom, e-learning and b-learning). The last one refers to the e/b-learning courses.

TRAINING ORGANIZATIONS

A.1.) REQUIREMENTS OF STRUCTURE AND INTERNAL ORGANIZATION

A.1.1.) Human resources, space and equipment

Collaborators are responsible for the dynamics of projects, ensuring:

The creation or adaptation of programs, content and educational resources suited to this form of organization,
The development of educational programs and contents,
The learning and content management system creation or management of its features should be supported by a technological platform or other means.
The mentoring of activities and evaluation in distance education, among others.

- Space and equipment in number and with adequate characteristics to the training activity. Minimum requirements for classrooms and practical training.

- Space and equipment for practical training appropriate to the areas of training development.

A.1.2.) Technical and pedagogical skills appropriate to the areas of education and training required for certification

Requirements	Criteria	Source of verification will be
Training or work experience will be at least 1 year in the organization or management of distance education, implementation of training programs and teaching strategies in distance learning or tutoring methods and techniques in the context of distance training.	Training will be adequate in distance learning = initial training or continuous thematic development projects related to distance learning, including specific educational training. Professional Experience = Experience developing professional activity related to distance education programs.	Curriculum Certificates of required training Certificate of fitness or certificate of pedagogical teaching skills Certificates of professional skills, if holder.

A.2.) PROCESS REQUIREMENTS IN DEVELOPING TRAINING

A.2.1.) Design and development of training

A.2.2.) Rules of operation

A.2.3.) Organization of TPB – Technical and Pedagogical Brief

A.2.4.) Establishment of contracts and handling complaints

This group of requirements represents a set of key processes essential in the development of training activity by defining conditions in terms of pedagogical and organizational practices, which underlie the process of designing and implementing training.

A.2.1.) Design and development of training activity

For the purpose of verifying that the organization carries out the training activities it is essential that:

- Have previously established **general** and **specific** learning **goals**;
- Those activities design are based on pedagogical criteria;

- The curricula is selected taking into account the basic knowledge of the trainees on the one hand, and learning objectives to be achieved, on the other;
- There is a careful sequence of materials to maximize learning;
- Training professionals with teaching skills are involved;
- There is a careful selection of participants, ensuring their consistency with the type of recipients due to the action;
- The phases of the training cycle are followed:
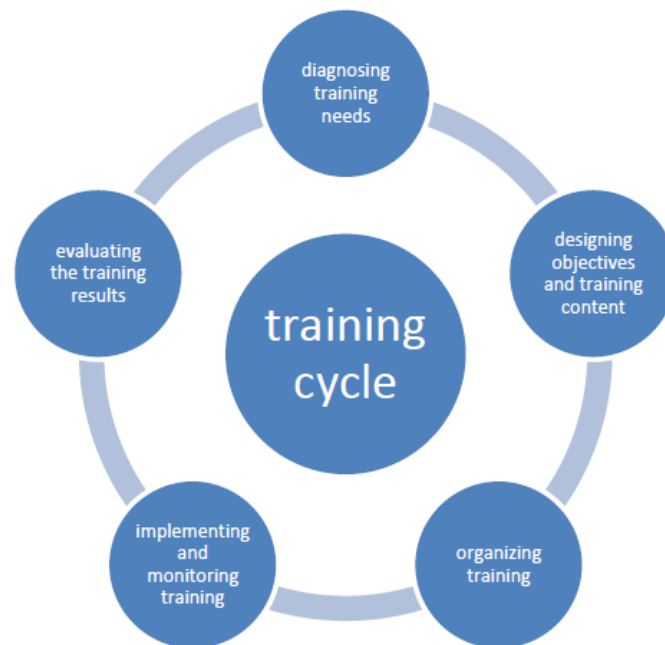
The organization must demonstrate that the training actions that it develops fit the objectives and trainees and that are structured based on the following steps:

- Defining the skills to be developed by the trainees;
- Defining of learning objectives to be achieved by trainees;
- Defining of learning paths with the modules identification and their pedagogical sequence in the training program;
- Identifying and implementing the learning strategies based on methods, activities and technical and pedagogical resources;
- Identifying and implementing the methodology and tools for selection of trainees and trainers;
- Identifying and applying the methodology and support tools for use during and after training, including employability and social inclusion;
- Identifying and applying the methodologies and tools for evaluating the satisfaction of learning and training;
- Identifying and applying the selection criteria for the organizations set to receive the trainees for the development of practical training in the workplace (when applicable);
- Defining and implementing the educational plans of practical training in the workplace, including the mechanisms of monitoring and evaluation stages (when applicable).

- The organization must demonstrate that it creates or adapts technical and pedagogical resources for the training it develops:

Criteria for assessment of technical and pedagogical resources

Organization of information	It takes into account: The clarity of structure; The logical grouping of the content and its homogeneity; The articulation of content with the pedagogical path.
Presentation, attractiveness and readability	It is considered: The graphical presentation; The balance between text content, images, graphics, audio, etc.
Ease of use	Related to: The adequacy of the physical characteristics of the resource to the objectives of its use; The functionality and ease of reference.
Identification of sources used and recommended	The clear identification of all sources and the authors who contributed to the design or adaptation of educational resource, aimed at ensuring an ethical dimension of this activity, safeguarding copyrights.

ELEMENTS OF TRAINING

Elements	Observations
Learning Objectives	Aims of the course, general and specific, should always reflect the skills to be developed. Can be aggregated by fields of knowledge and should be formulated according to the principle of triple C - cognition, communication and co-operation.
Recipients	Description of the general characteristics and the entrance required profile of the target group, as well as the set of access requirements to the course.
Type of training	In accordance with the training arrangements set out in the National Qualifications or special rules applying to the formation in question.

Organization of the training	It may be in person, at distance, in the workplace (either exclusively or in combination of various forms).
Pedagogical contents	Selected according to the characteristics of participants and aggregated into modules or other sequence that is deemed appropriate to achieve the expected pedagogical results.
Hours	Total and per module or unit of content, depending on the structure of the educational route.
Training methodologies	Teaching methods to be used by the trainer, which reflect the learning strategies defined.
Criteria and evaluation methodologies	Definitions of dimensions and criteria of evaluation to be carried out - learning and behavior of students, performance of the trainer, the training process conditions. Definition of assessment instruments and moments that are applied.
Learning resources	Prediction of type of technical and pedagogical resources to be used in support of trainees and trainers.
Space and equipment	Description of the characteristics of the areas of training and equipment necessary to perform the action to fulfill the goals.

The operation of any training program should be based on planning documents of the time units that compose it, usually organized into modules sessions. A proper planning is essential for the trainer to ensure that the learning process is completed and the trainees to achieve the desired results, so the session plans guide the action of training.

The advantages of using session plans are placed at three levels are:

1º) before the training, it allows the reflection, selection and structuring of content to transmit. It also allows the activities to be performed and predicts or anticipates the necessary resources;

2º) during training, providing guidance for their development;

3º) after the training, allowing a history of actions and thinking about the adjustments and improvements to make in future actions.

Its development is, primarily, the responsibility of the trainer but the structure must be set by the training organization, available to all trainers and preferably discussed among all. A session plan covers, normally, all the elements of a theoretical and practice needed to develop the session:

- Name of the action / course, module and session

- Aims of the action / course, module and session

- Overall duration of the session

- Identification of the trainer

- Identification of training group

- Organization / address the following content, definition of activities to be undertaken and their temporal distribution

- Methods and teaching techniques to use in exploring the content

- Identification of technical and pedagogical support

- Moments, criteria and assessment instruments

DIMENSIONS AND MOMENTS FOR EVALUATION OF TRAINING

ASSESSMENT FOCUS	DIMENSION	FOCUS	MOMENTS
Previous studies on pre knowledge and expectations	Diagnostic evaluation	Knowledge already held by the students on the topic of training and about their expectations for the same (often used in language or computer training)	Before the action, to set goals, contents and methods and form homogeneous groups of students starting in knowledge
About learning outcomes	Assessment of acquired learning or knowledge	Results achieved by the trainees at the end of an apprenticeship. Required to be articulated with correctly stated educational objectives	During the course of action, at certain times, according to the objectives, target groups and methods of training

	Impact assessment of training	Transposition of effective skills developed in training for the professional context, can measure the performance impact on the individual practitioner or organization and also the return on investment in training	After training and at the socio-professional context where the skills are applied
About the training process	Evaluation of satisfaction	Several dimensions of the educational process can be applied to all players in training. Focus on the "client" of training and their satisfaction with the overall quality of training	At the end of the action or module, depending on the overall duration and sequence modular
	Performance evaluation of trainer	Action of the trainer, pedagogical and technical competence in the pedagogical relationship established	At the end of the action or module taught by each teacher
Monitoring the training process	Pedagogical and organizational actions, ensured that all the time for managing training and coordinating education		During the preparation and implementation of actions (including internships or training in the workplace)
Monitoring post-training	It may include: satisfaction assessment with the knowledge / skills developed and the opportunity of applying them; analysis of post-graduate course in terms of integration or professional development, among other		After training and socio-professional context where the skills are applied

A.2.2.) Rules of operation

An organization shall prepare and make available the operating rules applicable to your training activity.

A.2.3.) Teaching technical dossier

The organization and file of information and documentation on the training is an important part in the process of doing it, since it enables the training organization:

- To have direct and up-to-date control on the implementation of actions;

- Having a reliable history of the developed training actions, available by itself or at the request of stakeholders and also by training activity auditing entities.

The organization must have appropriate means and instruments to collect permanent information related to the execution of actions in order to control and subsequent evaluation of results, and ensure the registration, organization and treatment in the form of a technical and pedagogical dossier for each training actions.

The structure of the teaching technical dossier is free, provided it includes the elements provided. For certification purposes, all elements can be scanned and stored on computer, even those requiring the signing of players. Where the organization uses public funding, shall support the enforcement of legislation or regulations of the respective funding organizations.

A.2.4.) Training contracts

The training organization must enter into a contract in writing with the students regarding the training. Must have a complaints book for occasions required by law and proceed in accordance with it, in relation to providing access to the book and the processing of complaints.

A.3.) REQUIREMENTS FOR RESULTS AND CONTINUOUS IMPROVEMENT

- Analysis of activity results, monitoring post-training and continuous improvement.

DISTANCE LEARNING

The design and implementation of programs of distance education should follow the steps described above, obviously adapted to this specific form of organization. The planning of distance education in terms of aims, content, learning and assessment strategy must take into account:

a) The establishment of a pedagogical model appropriate to the characteristics of this type of training - to a more independent and flexible learning at the pace of each student, but whose development has to be supported, monitored and evaluated;

b) The existence of a balanced pedagogical relationship, where there is a combination of classroom training and distance;

c) The existence of a learning and content management system, usually technology-based features which guarantee an efficient organization and implementation of training: promotion of actions, and contract applications, content distribution and materials management, interaction between actors, active support of mentoring, guidance and support of students, reception and handling of complaints, among others.

The learning content for the distance training on specific features for use in this form of organization, particularly when the distribution is supported by technology-based:

- Easy accessibility by recipients;

- Arranged according to the pedagogical sequence set;

- Readability, in terms of presentation quality graphics, text, images;

- Autonomy of the recipients in their ownership and use;

- Interactivity in order to facilitate an active relationship between the content and user;

- Internal navigability that shall allow an orientation and progression into the content;

- Flexibility, because they can be adjusted to different rates of learning;

- Reuse, allowing the same content can be framed in different learning routes.

Whenever your distribution is supported on technology platforms, content must be developed in accordance with the technical specifications of international standards

that aim to ensure interoperability across platforms - how to "communicate" and how such content can be shared and reused in different systems.

In addition to the content itself, there must be tools to support their operation such as teaching *kits,* guidelines for self-study guides, operating manuals, among others, which encourage their use by trainees.

AN ACTIVE TUTORING SYSTEM

The distance learning is a clearly learner-centered process and in their learning styles and rhythms, playing the tutor an essential role as facilitator of this process, supporting the trainee in their difficulties, answering questions and encouraging interaction with the system technical support.

The project training set must provide, compared to the activity of mentoring:

- The forms and moments of communication and interaction among stakeholders;

- The mechanisms of incentives and *feedback* to trainees;

- The ways of monitoring progress of learning of the trainees.

An active mentoring means that the person responsible for monitoring the trainees have a proactive intervention of their training, fostering a collaborative learning environment, giving guidance and support to learners but also control teaching and evaluation.

Tutor is assigned tasks such as:

- Assist in the coordination of the program;

- Define the learning aims;

- Identify educational resources;

- Negotiate a plan of work;

- Set time support;

- Agree a training contract;

- To inform and enlighten the students about the program, aims and activities of the training and the use of the technological system;

- Insert content and teaching materials and direct its operation;

- To support and motivate learners in the organization of their training path;

- Manage the participation and answer questions;

- To guide and stimulate activities in synchronous and asynchronous sessions;

- Monitor individual and group work and give *feedback;*

- Assess the students.

The intervention of the tutor, the pedagogical activities developed and the interaction between those involved in training must be regulated in a written form known by all. The management system and learning content chosen should centralize the process of communication between those involved in training, enabling monitoring and active mentoring by providing means of synchronous and asynchronous communication, shared or individual.

Like classroom training, mechanisms for evaluating the results achieved are an important component of distance learning. In the planning stage should be immediately set the strategy for monitoring and evaluation as well as the methods and times of application of instruments and *feedback* of results to students, the fundamental condition for maintaining their motivation and their learning progression.

In terms of learning, the evaluation should provide information to enable the learner on:

- To their knowledge before they start training - diagnostic assessment;

- The results obtained in terms of learning, according to the criteria, during and after training - knowledge assessment formative and summative;

Where the training is supported on platform technology, may still be available other relevant indicators to assess the learner's participation and their level of interaction with the content and the activities proposed.

LEARNING EVOLUTION CONTROL BY THE TRAINEE THROUGH THE RETURN OF THE EVALUATION RESULTS

Whatever the model evaluation set, the organization shall ensure that they are guaranteed:

a) The reliability of the information collected from the trainees;

b) The return of the assessment results to students, in a systematic manner to support the learning process;

c) The use of evaluation results for continuous improvement of the training device adopted, including those relating to the satisfaction of the trainees;

CREATING AN E-LEARNING COURSE

An e-learning course should be organized into six categories:

Interact: requires the creation of interactive content with series of answers for different questions;

Observation: offers templates for animations and other demonstrations;

Game: allows a little fun with some interactive games;

Reading: creates contents with text, tables and images, as well as interactive quizzes;

Simulate (Optional): try to practice simulations for students;

Classroom: combining text, images, tables and other elements in a comprehensive format.

E.1) SCORM STANDARD
The standard SCORM (Sharable Content Object Reference Model) is a set of specifications and standards for designing and developing e-Learning that ensures interaction, accessibility and reuse of content.

E.2) RAPID CONTENT DEVELOPMENT
Rapid Content Development Methodology is a methodology for developing e-learning content that ensures the adequacy of the developed contents to the learning aims with a reasonable cost and time spent.

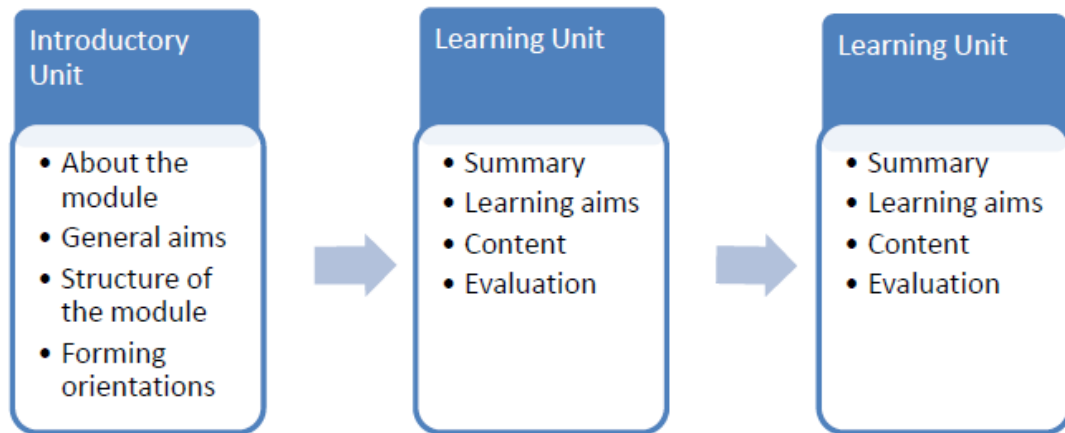| Phase	Procedures
Planning	**Information Collection** • Define project scope and learning aims; • Characterize the target group; • Identify constraints and technical requirements; • Collect existing content (PowerPoints, manuals, notes trainer / teacher, videos) and identify experts; • Identify the most important performance problems that result from impaired learning; **Planning Document** • Analyze existing content; • Define outline of the project; • Produce a planning document; • Obtain client approval
Design	• Analysis of tasks and concept; • Establish learning units and sequence; • Create prototype; • Create and test storyboard (if applicable) • Obtain client approval
Development	• Conversion and programming content and interactivity; • Produce and edit images, audio and video; • Test content; • Final review; • Obtain client approval.

E.3) MODULAR STRUCTURE OF AN E-LEARNING COURSE

- Modular construction means that a course is divided into modules and each module includes a set of units of learning very extensive and easy to assimilate.

The modular structure presents, among others, the following advantages:

- Easy assimilation of very extensive learning units;
- Better time management on the part of trainees;
- Increased motivation of learners because of the sense of progressive achievement of learning aims.

The following figure illustrates the modular structure of the contents:

Introductory Unit	Learning Unit	Learning Unit
• About the module • General aims • Structure of the module • Forming orientations	• Summary • Learning aims • Content • Evaluation	• Summary • Learning aims • Content • Evaluation

Element	Description
Introductory Unit	All modules start with a framework initial unit containing trainee orientations towards navigation and content use.
Learning Unit	The contents have a modular structure, divided into low extensive and easy to assimilate learning units. The learning units include an initial summary of guidelines, learning aims and a final evaluation.