

# Learning objects design in the Spanish Army

## 1.- Introduction

In the Academia de Logística del Ejército de Tierra (ACLOG), situated in Calatayud (Zaragoza), is the Subdirección de Enseñanza a Distancia, from where Spanish Ministry of Defense eLearning is promoted.

The main objective of this military academy is personnel and material logistic training for officers, NCO and other ranks but its tasks in online training in the Army are:

- Distance studies department: Courses to obtain 'Título de Técnico Militar'. (Equivalent to vocational training for other ranks).
- ICT Department: Basic course on learning virtual environment teaching (for teachers), advanced course on learning virtual environment teaching (for teachers) and course on multimedia resources production (for no teachers).
- Webmáster: Administration and maintenance of the learning management system (LMS) for Spanish Army courses.

The creation of the Ministry of Defence Virtual Campus was published in Official State Gazette on the 14th of September of 2009. Its aim, according to article 2, is:

"Build an integrated system of teaching and learning in a virtual environment for Ministry of Defence that, conceived as a strategic tool, facilitates the continuous learning anytime and anywhere, obtains a higher efficiency of the resources and enables the maintenance and improvement of quality levels of required teaching".

El CVCDEF standarize eLearning process of the Army, Navy and Air Force and is composed for:

- Learning Mananement System: SABA
- Webinar: Saba Centra
- Metadata: LOM\_MDEF. Design phase.
- Repository: In project.

CVCDEF organization is as follows:



CVCDEF organization

## 2.- Learning Objects

Instructional design for online training in CVCDEF specifies that training contents will be distributed as learning objects published in SCORM 1.2, adopting the following definition of LO (Sánchez Alonso, 2005):

“A learning object is a didactic unit in digital format, independent, self-contained, durable and predisposed for reuse in several educational contexts for the inclusion of standardized metadata, specifically oriented to the automation of management processes”

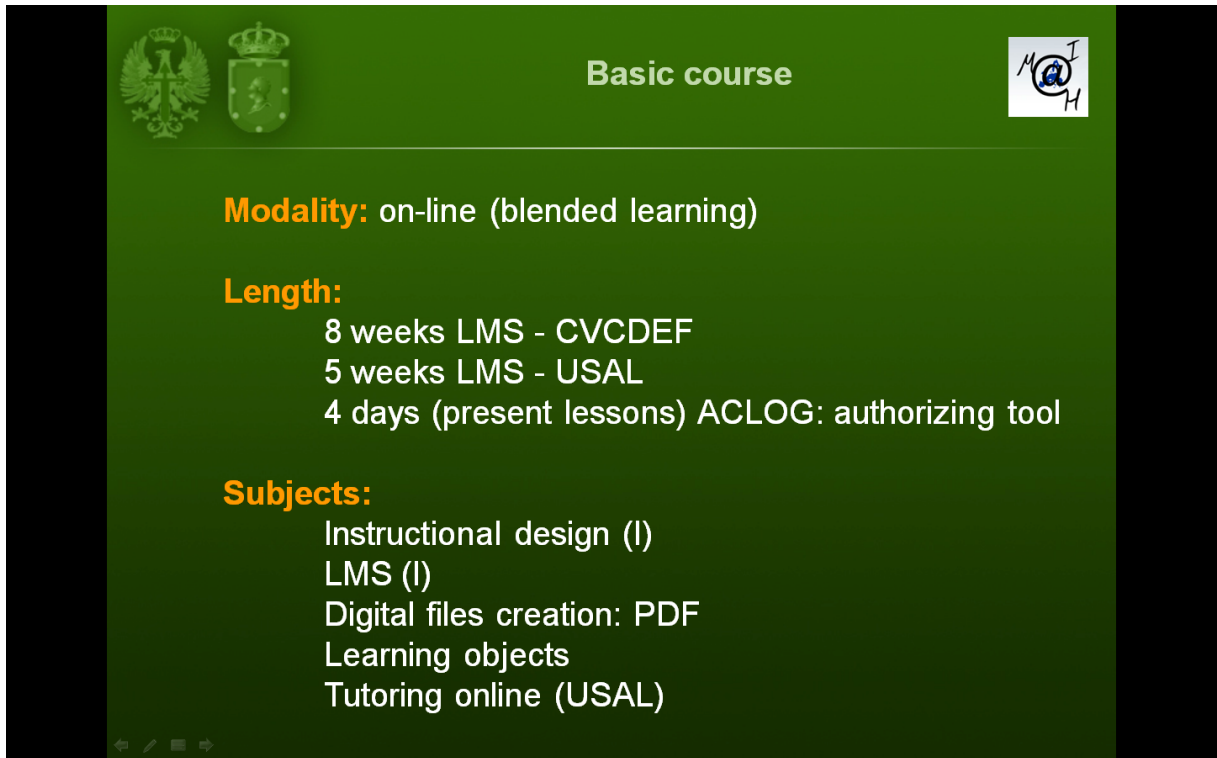
These LO's will be labelled with LOMMDEF metadata profile, nowadays in development, in order to be saved later in the FAs repository for their reuse.

The production on LO's is oriented so that they can be developed by teachers of the military academies, but also is possible the collaboration of other companies in big projects. Teachers are supported by specialized people who belong to the nucleus of resources production created in every military academy.

### 3.- Learning process plan

For the training of the people involved in online training, the following courses have been created:

#### 3.1.- Basic course on learning virtual environment teaching: for teachers



The image shows a presentation slide with a dark green background. At the top left, there are two crests. In the top center, the text 'Basic course' is displayed. At the top right, there is a small logo with the letters 'M@I' and 'H' around a globe. The main content of the slide is organized into three sections: 'Modality', 'Length', and 'Subjects', each with a list of details.

**Modality:** on-line (blended learning)

**Length:**

- 8 weeks LMS - CVCDEF
- 5 weeks LMS - USAL
- 4 days (present lessons) ACLOG: authorizing tool

**Subjects:**

- Instructional design (I)
- LMS (I)
- Digital files creation: PDF
- Learning objects
- Tutoring online (USAL)

### 3.2.- Advanced course on learning virtual environment teaching: for teachers



The slide features a green background with a dark green header. On the left, there are two heraldic crests. The header text 'Advanced course' is centered in white. On the right, there is a small square logo with a stylized 'M@H' and a blue circle. The main content is in white text, with key terms in orange.


**Advanced course**

**Modality:** on-line (blended learning)

**Length:**  
7 weeks LMS - CVCDEF  
3 weeks LMS - USAL  
3 days (present lessons) in ACLOG

**Subjects :**  
Instructional design (II)  
LMS (I)  
Graphic design theory  
Introduction to digital audio and video  
Project management (USAL)

### 3.3.- Course on multimedia resources production: for no teachers



The slide features a green background with a dark green header. On the left, there are two heraldic crests. The header text 'Course on multimedia resources production' is centered in white. On the right, there is a small square logo with a stylized 'M@H' and a blue circle. The main content is in white text, with key terms in orange.

**Course on multimedia resources production**

**Modality:** on-line / presente lessons (mixed)

**Length:**  
12 weeks LMS - CVCDEF  
2 weeks LMS - USAL  
3 weeks (present lessons) in ACLOG

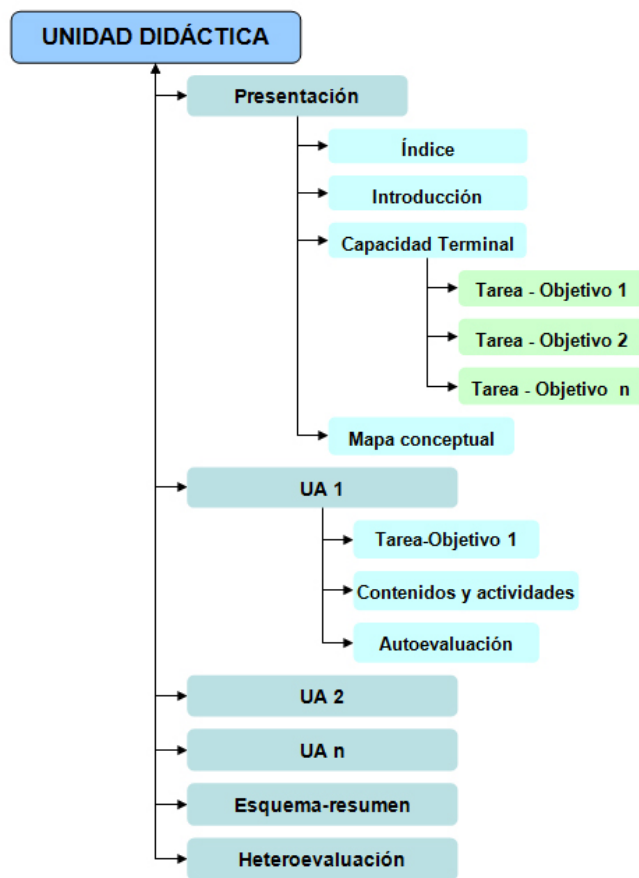
**Subjects online period:**  
Graphic design theory  
Cameraman (I)  
Digital audio edition (I)  
Digital video edition (I)  
Animation with Flash (USAL)

#### 4.- Diseño instruccional del CVCDEF

CVCDEF instructional design promotes the training base on competences, understanding with “competent” in professional terms (Echevarria, 2001):

“A person has professional competence if he has the knowledge, skills and attitudes necessary to perform his own work activity, he solves problems autonomously and creatively and he is trained to collaborate in their work environment and in the organization of work.”

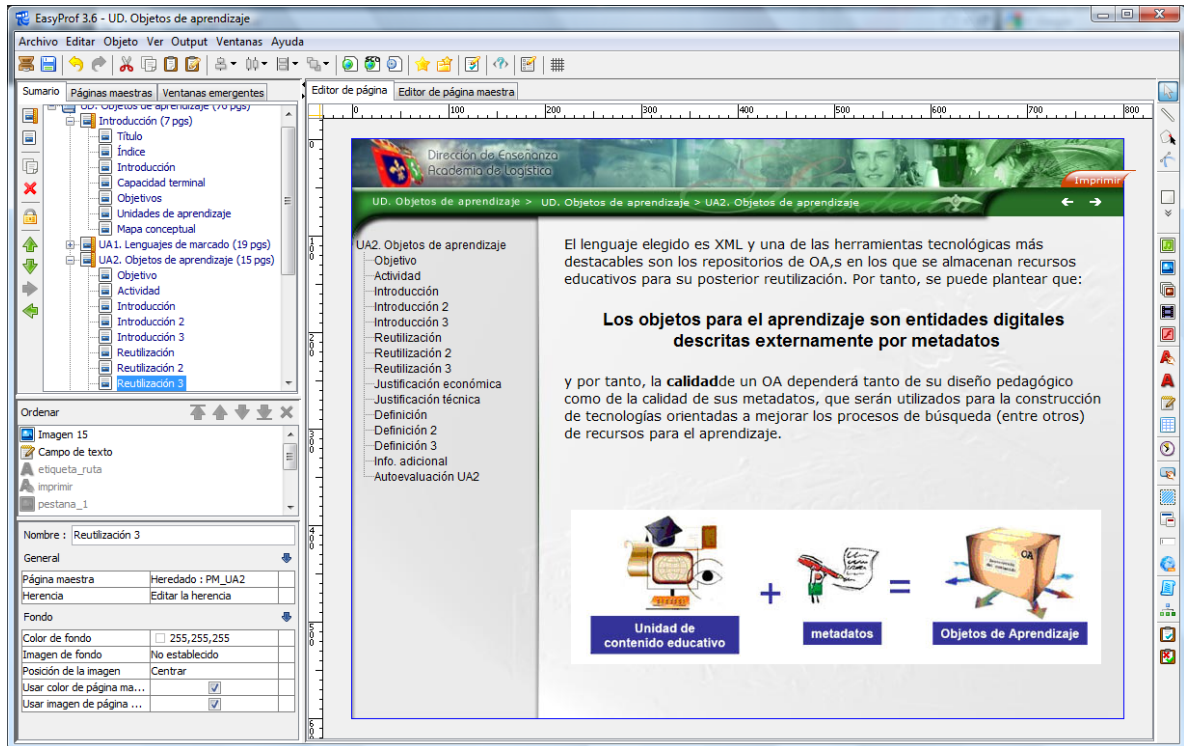
Moreover this model structures a didactic unit according to the following chart:



Learning objects structure

## 5.- Authorizing tool:

The authoring tool used by military teachers to design LO, s is EasyProf. This tool was selected, approximately 6 years ago, for to be user-friendly and public in SCORM 1.2. Any teacher, without much knowledge of computers, you can design learning objects with this Authorizing tool.



EasyProf: Interface

## 6.- Style guide

CVDEF disposes of a style guide whose main aim is to define graphic aspects of contents, the elements which form the interface and its distribution.

This guide is embodied in templates that are provided to developers, helping teachers to focus on its content, which is really important, and allows them to forget other peripheral issues such as design and composition of their work. The uniformity of content is also grateful for the students; a similar navigation and content presentation conveys the sense of planning and order.

UD. Objetos de aprendizaje

Dirección de Enseñanza  
Academia de Logístico

UD. Objetos de aprendizaje > UD. Objetos de aprendizaje > UA1. Lenguajes de marcado >

**UA1. Lenguajes de marcado**

- Objetivo
- Actividad
- Lenguajes de marcado
- HTML. Editores
- HTML. Editores 2
- HTML. Tipos de etiqueta
- HTML. Tipos de etiqueta 2
- HTML. Tipos de etiqueta 3
- HTML. Estructura
- HTML. Etiquetas
- HTML. Etiquetas 2
- HTML. Hojas de estilo
- HTML. Hojas de estilo 2
- HTML. Hojas de estilo 3
- HTML. Información adicional
- XML
- XML2
- XML3
- Autoevaluación UA1

**b) Etiqueta con atributos**

Añade, a lo descrito en el apartado anterior, la posibilidad de incluir propiedades que pueden adoptar distintos valores:

```
<nombre etiqueta atributo1="valor" atributo2="valor"> ... </nombre etiqueta>
```

**<a href="html1.pdf"> Pulse aquí </a>**

En este caso el código crea un enlace con otro documento. La etiqueta utilizada es "a", que significa "andar", y el valor del atributo "href" es "html1.pdf". Como resultado, al pulsar sobre la cadena de caracteres "Pulse aquí", se abrirá el documento "html1.pdf". Observe que esta cadena se muestra en pantalla en otro color y subrayada para indicar que es un hipertexto.

C:\Documents and Set...  
Archivo Edición Ver E. >>  
Atrás > < >>  
Dirección Ir Vínculos >  
Pulse aquí  
Mi PC

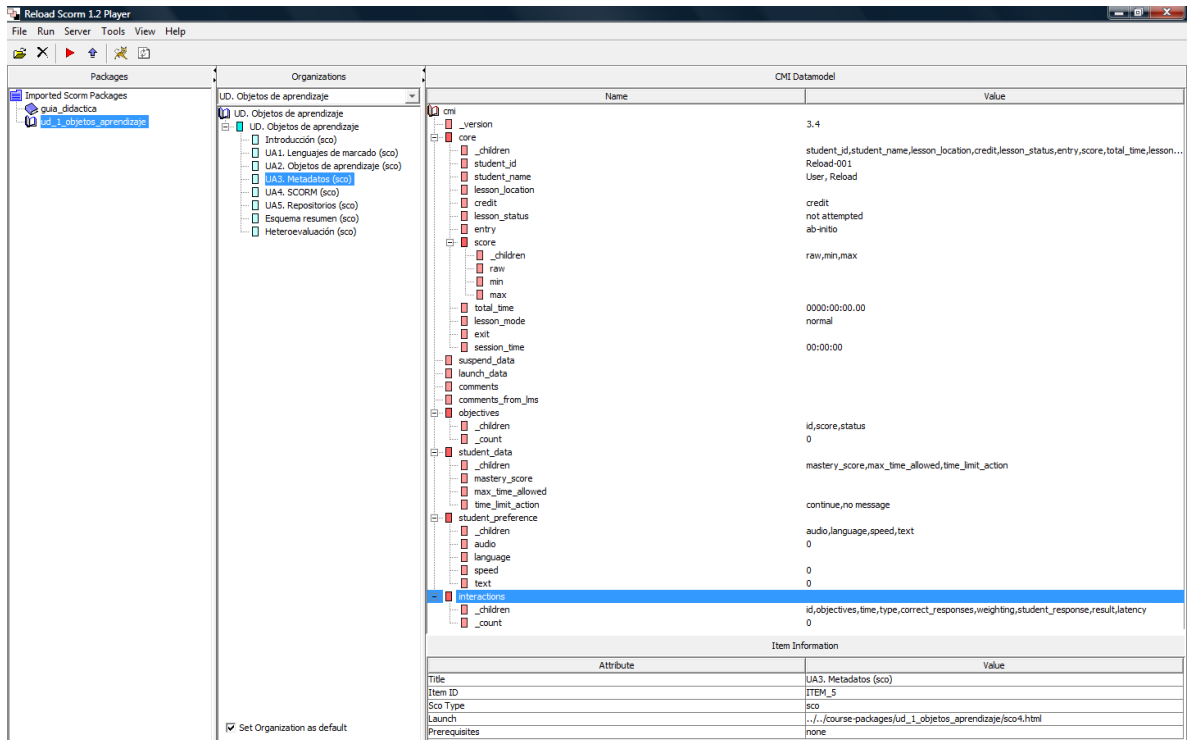
Screen designed according to style guide

## 7.- Technological quality test

“ADL Conformance Test Suite” is used for quality control of SCORM packages. This test allows to certificate that a SCORM package fulfils the norms and rules defined by the standard.

Learning objects are also released with “RELOAD SCORM Player”. This application simulates a LMS and it allows:

- Error detection.
- SCORM variables control.
- Test SCO,s.



Learning object launched Reload Player

## 7.- Developing projects:

Some projects currently are developing:

- Metadata profile for LO,s: LOM\_MDEF
- Create a LO's repository. It has raised the possibility of federating the Spanish repository with other NATO repositories.
- Pedagogical quality test.