"LUCIAN BLAGA" UNIVERSITY OF SIBIU
FACULTY OF HISTORY AND PATRIMONY
INSTITUTE FOR THE STUDY AND VALORIFICATION
OF THE TRANSYLVANIAN PATRIMONY IN EUROPEAN CONTEXT

ACTA TERRAE SEPTEMCASTRENSIS

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IX

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THE EXPERIENCE OF LUCIAN BLAGA UNIVERSITY FROM SIBIU TO DELIVER E-COURSES AS A TOOL TO BUILD VIRTUAL MUSEUMS

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Keywords: *E-Courses, F-MUSEUM project, museum, manager, content, digitization*
Abstract: *A presentation of the work done and undergoing at University Lucian Blaga from Sibiu (ULBS) related to the e-courses developed in F-MUSEUM project where ULBS was partner. The e-courses were tested on the university students at the master "Protection of the patrimony".*

Introduction

Fig. 1. Print screen http://www.europeanvirtualmuseum.net/e-courses.asp

The staff training in the museum is one of the most important activities and implies basic knowledge about the latest technologies in the electronic space. One of the main targets is to upgrade the stuff abilities to use all the resources they dispose of. Another goal is to interact with our visitors through pedagogical

approaches. Our courses were tested on the university students at the master *Protection of the patrimony*. Students and heritage linked jobs are targeted too.

The e-courses were used to build up the F-MUSEUM learning model (F-MUSEUM Book 2009, p. 233) focused on network learning community based on a workplace learning approached, targeting competencies and build in a standardized form through competences learning units. The e-courses are available on line at http://www.europeanvirtualmuseum.net/e-courses.asp in English, Italian, Romanian and Bulgarian languages.

Fig. 2. The workflow of FMUSEUM e-courses.

The team from University Lucian Blaga Sibiu participated in the upgrading the *content expert*, *manager for virtual museums* and *web designer for virtual museums* e-courses. The beneficiary museums and students were used for testing and adapting the learning units. The e-communicator e-course is not presented here.
Course specifications for employment market[1]:

TRAINING STANDARD 1 – WEB DESIGN OF THE VIRTUAL MUSEUM

Job specification: to design the structure of the site, indexes and metadata, in close co-operation with the Project Leader; to participate in interactive design processes and evaluations featuring site style, feel and navigability; advice on how the site can facilitate the generation of new web communities, based around site content; to work with content and web design experts to implement the web design; to create a usable, navigable and attractive website featuring prescribed content and given design; address security issues, passwords, firewalls, payment systems and protection against hackers.
Competence: Know how to design and develop the website and in particular:
- upload the database
- publication of data on the Internet

Know how manage the digitalization of images and in particular:
- use the software for modeling 3D images
- use photography within the given context

Existing job profiles related:
Web designer, Web manager, Computing expert, e-learning expert.

DU 1: Upload the database
Objectives: to plan and realize a System of Managing Relational Databases; to define the structure of the database (organizing data in tables and their connections); to identify the operations that can be executed in interactive modality.

LO 1.0 Databases and the publication of data on the Internet
LO 1.1 General Information
LO 1.2 The relational model
LO 1.3 Management systems of the relational databases
LO 1.4 Configuration of databases
LO 1.5 Physical implementation of data (a)
LO 1.6 Physical implementation of data (b)

DU 2: The publication of data on the Internet

[1] The specifications were first defined in http://www.europeanvirtualmuseum.net/documenti/Report_Professional_roles_FINAL.pdf by EuroInovanet and in M. Merlini, A. Velichkov (eds.), *Routes and Itineraries from the Virtual Museum of the European Roots*, F-MU.S.EU.M. Project, Sofia 2009, pp. 241-248.

Objectives: to identify the operations that can be executed in interactive modality; to know how to use the main software for realizing the web pages.
LO 2.1 Hyper Text Markup Language
LO 2.2 Active Server Pages (ASP)
LO 2.3 ActiveX Data Object (ADO)
LO 2.4 Structured Query Language (SQL)
LO 2.5 JavaScript

DU 3: Software used for modeling 3D images

Objectives: to know how to use the main software for realizing the images in 3D; to know how to converse profitable with the professional figures of the expert of the contents and with the project leader.
LO 3.1 3D Software Object Modeler
LO 3.2 VR WORX 2.5
LO 3.3 PhotoModeler
LO 3.4 PixMaker PRO

DU 4: Photography

Objectives: to know how take photographs to know how make digital elaboration of the sequence of pictures through the Apple software "Quick Time VR".
LO 4.1 Projecting the camera set
LO 4.2 Lightening
LO 4.3 The camera

Competence Standard 2
Competence Unit 2 - CONTENT SETTING OF VIRTUAL MUSEUMS

Job specification: Lead the content gathering, retrieval and presentation in the project; seek and represent knowledge appropriate in an e-learning environment; access relevant resources such as literature and information sources (including bibliographies, directories and indexes); help manage the museum's collection and select items for digitization; support the preparation of design, graphics and visual presentations using multimedia.

Competence: Know how to prepare and manage a repository of contents for the website and specifically: develop a repository plan according to the Virtual Museum project and potentialities; design and use the cataloguing criteria and formats (Identity Card); manage the Relational databases; manage the web uploading process in cooperation with the web manager; develop specific e-learning contents.

Existing job profiles related: Researcher; Contents architect; Training methodologies expert (can be separated from the contents).

TRAINING STANDARD 2 – Content setting of virtual museums
DU 1: Virtual museums: why?

Objective: to be aware of the main characteristics and advantages of virtual museums with particular emphasis on the possibility to attract a larger interest through friendly and pro-active visits

LO 1.1 Virtual museums: objectives and characteristics

LO 1.2 Personalization of the virtual museum and accessibility

DU 2: Description of F-MU.S.EU.M. Identity Card

Objectives: to apprehend classificatory rules for the F-MU.S.EU.M. objects; to be able to identify the communicative value of each cultural resource; to be able to schedule training paths for specific categories of visitors.

LO 2.1 Contents and utilities

DU 3: The database: hints

Objectives: to improve the communication with the web-designer who is the one entitled to data uploading; to know the basic structure of the database and how to elaborate queries

LO 3.1 Basic Elements for the Creation of Interactive and Dynamic Websites

LO 3.2 Databases

LO 3.3 The relational model

LO 3.4 Management Systems of Relational Databases

DU 4: Internet and virtual museums

Objectives: to improve the communication with the web-designer who's the one entitled to data uploading; to apprehend how uploading information and images on the website

LO 4.1 The Publication of Data on the Internet

LO 4.2 3D Software Object Modeler

LO 4.3 VR Worx 2.5

LO 4.4 PhotoModeler

LO 4.5 Pixmaker PRO

Competence Standard 3

Competence Unit 3 MANAGEMENT OF VIRTUAL MUSEUMS

Job specification: to manage and motivate a team that includes a variety of professionals from mixed governances (i.e. in-house and external) and disciplines; to plan the project and set SMART targets for its completion including key milestones, go/no-go points and rolling targets; o communicate effectively with the team, co-workers, external funders, partner museums, network providers; to hold and control the project budget; to create a project evaluation plan.

Competence - know how to concept and manage a Virtual Museum and in particular: analyze advantages and potentialities; identify market spaces and specific requirements; concept the project; building on and manage the staff appropriately; supervise and evaluate the results

Existing job profiles related: project manager, financial manager, manager of the institute, project leader.

DU 1: Virtual Museum from a managerial point view
Objectives: to acknowledge the web opportunities for museums in terms of communication; to improve graphic skills in order to construct virtual museum.
LO 1.0 The advantages of internet for museum communication
LO 1.1 The survey by the Dallas Museum of Art
LO 1.2 The impact of computer graphics and virtual reality
LO 1.3 Virtual museums as e-services
DU 2: SWOT methodology
Objective: to be familiar and to be able to apply SWOT methodology in reference to the construction of the virtual museum.
LO 2.1 The characteristics and use possibility of SWOT analysis
LO 2.2 Questionnaire for SWOT analysis
DU 3: The human resources for the virtual museum
Objectives: to know how to identify the key professional figures in building and managing a virtual museum; to make out the necessary competences in building and managing a virtual museum (Training needs analyses – TNAs); to be able to estimate the impact on the equal opportunities in building and managing a virtual museum.
LO 3.1 Professional profiles required by a virtual museum
LO 3.2 Role and skills of the professional profiles: the methodology Training needs analyses (TNAs)
LO 3.3 Impact on equal opportunities

Work undergoing at University Lucian Blaga from Sibiu using the F-MUSEUM e-courses experience:

1. Student Laura Coltofean won a grant regarding the Neolithic and Copper Age signs in Romania from F-MUSEUM management (work done is available on F-MUSEUM website) and she used the e-courses, mainly parts from Managers for virtual museums and content expert e-courses. She developed a procedure presented shortly in the actual number of Acta Terrae Septemcastrensis Journal.

2. Student Luca Adrian used the content expert e-courses for the project *Digi-Bruk*, a digitization work done for all journals held in National Brukenthal Museum Sibiu (F-MUSEUM beneficiary museum) portfolio using the guidelines of F-MUSEUM e-courses. His work is presented shortly in the actual number of Acta Terrae Septemcastrensis Journal.

3. The developing the www.preistorie.ro website using the F-MUSEUM database management skills learned from F-MUSEUM e-courses and learning model. The website will be launched at the end of 2010 and it is developed with *GitsCom Sibiu* (http://www.gitscom.ro, www.solutia.ro) company. The website will have a relational database for artifacts and library management for an integrated repository, user friendly.

4. Course support and exercises for students in MA specialization: *Protection of the Patrimony and Conservation of Cultural Heritage* mainly at courses *Theory of the Patrimony* (using FMUSEUM e-course for manager for F-MUSEUM)

The F-MUSEUM e-courses proved themselves to be very useful and practical for us, considering that they opened new opportunities for training and improving the activity developed by student, professors or museum staff. For these courses to remain always actual and in permanent contact with the developing technology, it is necessary that they are updated at least at a 2 years period.