# DELIVERABLE

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| **Project Acronym:** | **LINKED HERITAGE** |
| **Grant Agreement number:** | **270905** |
| **Project Title:** | **Coordination of standard and technologies for the enrichment of Europeana** |

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## D 7.4 Virtual Learning Environment

**Revision: version 1.0**

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| Project co-funded by the European Commission within the ICT Policy Support Programme | | |
|---|---|---|
| Dissemination Level | | |
| P | Public | X |
| C | Confidential, only for members of the consortium and the Commission Services | |

# Revision History

| Revision | Date | Author | Organisation | Description |
|---|---|---|---|---|
| 0.1 | 22/3/2013 | Antonella Zane, Elena Bianchi | UNIPD | First draft |
| 0.2 | 23/03/2013 | Ciaran Clissmann Lajos Vonderviszt, | PL<br>NSL | Peer review |
| 0.3 | 02/04/2013 | Antonella Zane, Elena Bianchi | UNIPD | Second draft after peer review by Ciaran Clissmann and Lajos Vonderviszt |
| 0.4 | 04/04/2013 | Antonella Zane, Elena Bianchi | UNIPD | Third draft after review by Ciaran Clissman |
| 0.5 | 05/04/2013 | Antonella Zane, Elena Bianchi | UNIPD | Final version |
| 1.0 | 07/04/2013 | Claudio Prandoni | PROMOTER | Formal check |
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**Statement of originality:**

This deliverable contains original unpublished work except where clearly indicated otherwise. Acknowledgement of previously published material and of the work of others has been made through appropriate citation, quotation or both.

# D7.4: IMPORTANT NOTE

**This document is an intermediate version of the D7.4 VLE.**

The are several reasons for this:
1- as of today, all the University of Padua learning sites, including our Linked Heritage courseware, are migrating from Moodle version 1.9 to the new Moodle version 2.2. This will have improved functions/functionalities, a new admin interface and an innovative user interface which is graphically consistent with the brand-new Website of the University of Padua.
The updated version of our VLE, specifically customised for the Linked Heritage project needs, will be released on 30 April 2013,

2- our work is strictly connected with the outputs of work packages n. 2-7. We cannot provide a final version of D7.4 at this stage as we are waiting for WP 2, 3, 4, 6, 7 deliverables to be released on 1 April 2013. Starting from that date, a new phase of the project will start during which we will plan and develop the missing multimedia Learning Objects and the associated further readings such as training materials and bibliography.

3- during the 3rd session of the evaluation test held in Padua on 6th march 2013, participants gave a lot of valuable feedback that we will be using for Linked Heritage Learning Objects upgrade. The deadline for this activity is 30th April.

**The final and complete version of this deliverable will therefore be released by the end of the project.**

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# EXECUTIVE SUMMARY

The present Deliverable describes the approach taken by the University of Padua to deliver Training content and sessions to the users, as stated in the Description of Work-Annex 1 *"In addition, users will be able to perform training sessions also through a Virtual Learning Environment developed specifically for this project by means of open source tools (i.e. Moodle, Sakai)."*

In addition, it may be noted that this **D7.4 Virtual Learning Environment** (focused on the web platform which hosts the Syllabus) **is complementary to D7.3 Training materials** (which focuses on the content of the Syllabus).

Both the Deliverables are released by the University of Padua on behalf of the Linked Heritage project at Month 24, as stated in the Description of Work (Annex I). They will subsequently be upgraded and enhanced and released in their final version by the end of the project.

The deliverable is structured as follows:

- Chapter 1 provides an introduction to the role of e-learning and to the Linked Heritage training programme
- Chapter 2 presents the Linked Heritage Virtual Learning Environment
- Chapter 3 summarises the next steps, including the migration to the new version of Moodle that will be completed before the end of the project

# 1 INTRODUCTION: WHY E-LEARNING

## 1.1 EU STRATEGY

The introduction of e-learning in education and training represents a strategic goal for the EU, as it plays a key role in creating knowledge, innovative learning and content services.

Since the adoption of the Lisbon Strategy in 2000, the EU has recognised that "*knowledge, and the innovation it sparks, are the EU's most valuable assets, particularly in light of increasing global competition.*"

The strategic framework for European cooperation in education and training ("ET 2020") recognises that high-quality pre-primary, primary, secondary, higher and vocational **education and training are fundamental to Europe's success** and that "*lifelong learning needs to be a priority - it is the key to employment, economic success and allowing people to participate fully in society*."

The activities related to the above-cited policies are synergistic with other actions involving all levels of education: "*promoting multilingualism, innovation, creativity and adoption of ICT (Information and Communication Technology)*"[1].

Moreover, the European Commission has funded important projects aiming to develop and share open educational resources (Learning Objects), e.g. CELEBRATE (IST-FP5), SLOOP, SLOOP2desc, Open Discovery Space through specific repositories.

Special attention is also paid to **Lifelong Learning** professionals and learners that change job over their lifetimes, moving towards different levels of qualifications, as is illustrated in the European Qualification Framework for Lifelong Learning[2].

## 1.2 LINKED HERITAGE TRAINING PROGRAMME

In view of the EU policy on e-learning education and training, Linked Heritage included in its scope the development of an **educational training programme** on a **virtual learning environment.** This takes advantage of the expertise and technical capacity of Padua University on distance learning online courses.

Due to this competence and experience, Padua University Centre for Libraries (CAB) has been actioned by the Linked Heritage project to design, develop and implement a comprehensive **training programme** (Syllabus), to be delivered via a Virtual Learning Environment.

The Syllabus focuses on key aspects of the Linked Heritage project (Europeana, aggregation, metadata standards, linked data, permanent identifiers, multilingual terminologies, public-private partnerships) in order to:

- Provide a flexible learning approach so that the user can follow the path that best fits his own needs, whether as a self-taught learner, attending a course, or as a professional;
- Serve remote, multi-country and multilingual users with different skills, backgrounds and purposes;
- Contribute to e-learning projects with high-quality content that could be reused by other course developers, schools, and universities.
- Disseminate the project results and share the important knowledge gained by Linked Heritage.

[1] http://ec.europa.eu/education/lifelong-learning-policy/framework_en.htm
[2] http://ec.europa.eu/education/lifelong-learning-policy/eqf_en.htm

# 2 THE VIRTUAL LEARNING ENVIRONMENT

The courseware "EU project: Linked Heritage" is available in the Virtual Learning Environment of the University of Padua, which runs on the Moodle platform. The courseware is implemented as a set of Moodle modules.

## 2.1 WHAT IS A VIRTUAL LEARNING ENVIRONMENT?

A VLE (Virtual Learning Environment) is a "software system designed to help teachers by facilitating the management of educational courses for their students. It is an education system based on the web that models conventional real-world education by providing equivalent access to classes, class content, tests, homework, grades, assessments, and other external resources such as academic or museum links. It is also a social space where students and teachers can interact through threaded discussions or chat. It typically uses Web 2.0 tools for 2-way interaction, and includes a content management system."[3]

Moodle, Blackboard, Angel, Sakai and Oncourse are some examples of well-known VLEs.

In the context of Linked Heritage, the VLE is a central component of the project's training strategy, enabling the new knowledge generated by Linked Heritage to be disseminated, appreciated and utilised across national and disciplinary boundaries. The unique strengths of education via a VLE (which can be further improved by blending with other forms and channels of education) make it particularly suitable for the geographically-distributed and variably-skilled audiences that we seek to serve.

## 2.2 MOODLE

Moodle (Modular Object-Oriented Dynamic Learning Environment) is an Open Source VLE. It is sometimes referred to as a Course Management System (CMS), or a Learning Management System (LMS). Moodle is the most popular of the (several) open-source VLEs; there are many others which are customised for a particular audience or application (e.g. openelms for business, Docebo for the corporate sector, eFront for a more light-weight approach).

**Moodle** is a software package for producing Internet-based courses and web sites. It is a global development project designed to support training and education over the web.

Moodle is provided freely as Open Source software (under the GNU General Public License). You are allowed to copy, use and modify Moodle provided that you agree to: provide the source to others; not modify or remove the original license and copyrights, and apply this same license to any derivative work. Moodle can be downloaded from: http://download.moodle.org.

Moodle can be installed on any computer that can run PHP, and can support an SQL type database (for example MySQL). It can be run on Windows and Mac operating systems and many flavours of Linux.

At the date of this deliverable Padua University is migrating its on-line courses to Moodle v. 2.2. This new version presents improved functionalities, a new admin interface and an innovative user interface. Moreover it will provides a core plugin called **Basic Learning Tool Interoperability (Basic LTI)** Framework to share activities and courses between Moodle installations without configuring a Moodle network.

[3] http://en.wikipedia.org/wiki/Virtual_learning_environment.

Moodle is designed on the basis of pedagogical principles. This has led to its broad popularity in the educational sector, though it is also used in many other domains. It is widespread in more than 200 countries and about 80 languages.

Moodle is used by a variety of institutions and individuals, including:

- Universities
- High schools
- Primary schools
- Government departments
- Healthcare organisations
- Military organisations
- Airlines
- Oil companies
- Independent educators
- Special educators

More information on Moodle is available on www.moodle.org and https://moodle.org/stats

*Figure 1 - there are many moodle users and resources worldwide*

## 2.3 THE UNIVERSITY OF PADUA AND MOODLE

Since the end of the 1990s, the University of Padua has been using different Learning Environments for its online courses. These include First Class[4] (by SoftArc / Centrinity), Chirone (Manfredi), Claroline[5]

4 http://www.firstclass.com/
5 http://www.claroline.net/?lang=en

(Catholic University of Louvain), Sinfodia[6] (CINECA), Lotus Learning Space[7] (IBM). Starting from 2003 some of Padua University Faculties adopted Moodle as a Virtual Learning Environment for their e-learning courses. In 2011 Moodle became the e-learning platform used by all Departments of Padua University on-line courses. The Centro Multimediale e E-Learning di Ateneo (CMELA) is now the University Moodle manager. It has developed in-depth expertise and it supports the broader university community in its use of Moodle. All of the University's Moodle learning sites are hosted at Centro Servizi Informatici di Ateneo (CSIA) server farm and are administered by CMELA.

CAB produces and manages the Linked Heritage course content and customises the layout of the user interface.

### 2.3.1 Why Padua University chose Moodle as a VLE

The choice of Moodle was based mainly on the results of UNIPD's practical experience across the platforms First Class, Chirone, Claroline, Moodle, Sinfodia, and Lotus Learning Space. Several international surveys[8] were also taken into consideration. The main requirements analysed by the surveys can be categorized as follows:

Features & Functionalities, Cost of Ownership, Maintainability, Usability, Adoption, Openness, Standards, Integration capability, LOM support, Reliability, Scalability, IP security, Hardware & Software, Multilingual.

Padua University chose Moodle for the following reasons:

- first of all because it is a **free** software platform with a dynamic **community** of developers ;
- it is easy and **intuitive** to use both by learners, teachers and admins;
- its web interfaces are highly **usable** and can be easily **customised** by institutions;
- furthermore, it supports international content **standards** such as SCORM (Shareable Content Object Reference Model) and AICC.

Another important issue for Padua University was the possibility to use a **secure** environment provided with an authentication system.

UNIPD appreciates the Moodle social constructivist **pedagogical** approach, whose main features are a collaborative environment, an active role in learning, learning by doing or learning by observing peers activities approach, ability to support different styles of learning, flexible and adaptable learning environment quickly responding to the needs of the participants.

We highlight that the University of Padua not only adopted Moodle as a VLE but also plays an active part in Moodle **community**.

In fact, one of the first Italian *MoodleMoot*s, the conference dedicated to users, developers and administrators of Moodle, took place at the University of Padua in May 2008 and CAB participated with a poster. [9]

As of today, Padua University VLE is migrating from Moodle version 1.9 to the new version 2.2. The LH Course on Moodle 2.2 will be released by the end of April 2013.

Therefore, this deliverable (prepared in later March 2013) describes the LH course running on the older Moodle version (1.9).

[6] http://www.cineca.it/sis_info/sinfodia.html
[7] ftp://ftp.software.ibm.com/pub/lotusweb/mindspan/ItQstart.pdf
[8] http://www.keilab.it/group/keilab_site/documenti/CensiMario.pdf
[9] http://eprints.rclis.org/11520/

### 2.3.2 Technical features

In the following pages relevant features for the LH course are described (text included in the boxes, our comments outside) . The complete Moodle 1.9 **user manual** from which the description of the following technical features are taken is developed by the **Moodle Community** and hosted on UNIPD - CMELA web site[10].

Moodle presents two types of interfaces: the administration/teacher interface and the user interface.

The administration/teacher interface includes all the necessary tools to build up LH course elements (e.g. modules, book, questionnaires) and to generate reports on course and participants activity, logs and statistics.

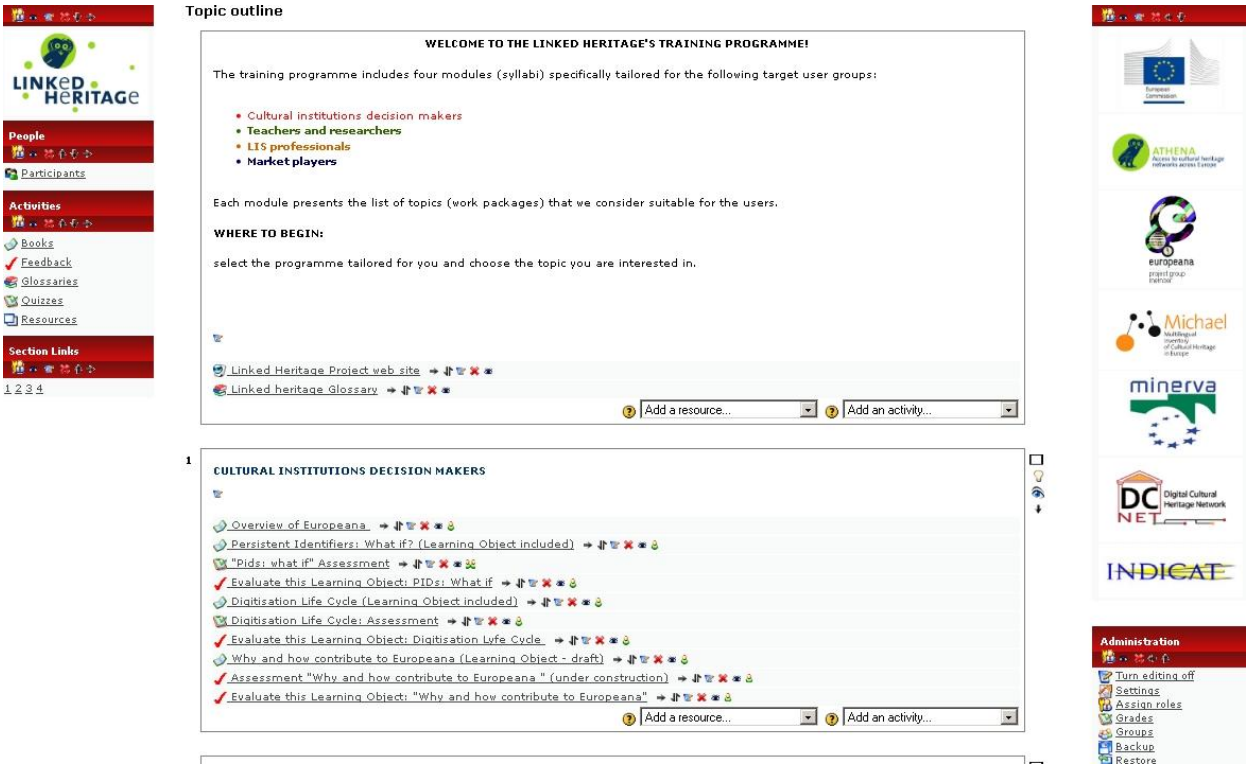



*Figure 2 – the administration/teacher Moodle interface*

The user interface provides navigation tools that facilitate the exploration of the resources (Books, Feedback, Glossaries, Quizzes) inside the modules of Linked Heritage course.In addition, the LH interface offers easy printing facilities in the book resource, a jump menu which helps users to move around the modules, the block People which shows who are the participants attending the course and how to communicate with them**.**

[10] https://elearning.unipd.it/moodle1/help.php?file=index.html

*Figure 3 – the Moodle user interface*

**Accessibility**

This site has been tested in a range of browsers and with screen reader software. Moodle uses semantic markup to assist screen reader users among others — site, page and block headings use <h1>, <h2>, navigation blocks are lists <ul> and so on.

Moodle complies with the World Wide Web Consortium's Web Content Accessibility Guidelines 1.0 level 1, most of level 2 (Double-A conformance) and some level 3[11].

*Links*

There is a link before each side block, which allows screen reader users to skip the block. Note, the link is hidden from graphical browsers. Many links have title attributes that describe the link in greater detail, unless the text of the link already fully describes the target (such as the headline of an article). If a link has an access key this will be announced in the link title. Whenever possible, links are written to make sense out of context. There are no javascript pseudo-links.

*Images*

All images use the alt attribute to provide alternate text where appropriate; images that are purely decorative contain a null alt attribute. Images, such as maps, that present complex information have a longdesc attribute linking them to a text description of the image content.

[11] http://www.w3.org/TR/WCAG10/

*Standards compliance*

This site is built using valid XHTML for markup and uses CSS for presentation.

https://elearning.unipd.it/moodle1/help.php?module=moodle&file=accessibility.html&forcelang=en_utf8

**Cookies**

Two cookies are used by this site:

the essential one is the session cookie, usually called MoodleSession. You must allow this cookie into your browser to provide continuity and maintain your login from page to page. When you log out or close the browser this cookie is destroyed (in your browser and on the server);

the other cookie is purely for convenience, usually called something like MOODLEID. It just remembers your username within the browser. This means when you return to this site the username field on the login page will be already filled out for you. It is safe to refuse this cookie - you will just have to retype your username every time you log in.

https://elearning.unipd.it/moodle1/help.php?file=cookies.html

We suggest Linked Heritage-course participants to enable both cookies in order to make login go faster.

**Roles**

A role is a collection of permissions defined for the whole system that you can assign to specific users in specific contexts.

For example, you may have a Role called "Teacher" that is set up to allow teachers to do certain things (and not others). Once this role exists, you can assign it to someone in a course to make them a "Teacher" for that course. You could also assign the role to a user in the course category to make them a "Teacher" for all the courses under that category, or assign the role to a user just in a single forum, giving that user those capabilities just in that forum

https://elearning.unipd.it/moodle1/help.php?module=moodle&file=roles.html&forcelang=en_utf8

In the Linked Heritage course users can have the following roles:

1. Participant: it represents users with a personal account. People with this role can browse the course, fill in quiz and feedback questionnaires and track their own logs, activity report and statistics
2. Guest: it represents users logging in with a key enrolment
3. Teacher: this role allows people to add and delete resources in the Linked Heritage course, to track the course activity report, to export logs and statistics of all participants
4. Administrator: this role gives full access to the entire learning site and to all courses.

**Assigning Roles**

By assigning a role to a user in a context, you are granting them the permissions contained in that role, for the current context and all "lower" contexts.

https://elearning.unipd.it/moodle1/help.php?module=moodle&file=assignroles.html&forcelang=en_utf8

The contexts foreseen in LH course are:

1. System (the entire installation) (CMELA)
2. Front page (the "site course") (CMELA)
3. Courses (CAB)

4. Blocks and Activities (CAB)

**Permissions**

Permissions are the settings that you grant for specific capabilities. In each role, you can choose to set the permission for such a capability to one of four values:

1. NOT SET: this is the default setting, generally. It's a neutral setting that means "use whatever setting the user already had".

2. ALLOW: by choosing this you are granting permission for this capability to people who are assigned this role. This permission applies for the context that this role gets assigned plus all "lower" contexts.

3. PREVENT: by choosing this you are removing permission for this capability, even if the users with this role were allowed that permission in a higher context.

PROHIBIT: this is rarely needed, but occasionally you might want to completely deny permissions to a role in a way that cannot be overridden at any lower context.

Special exceptions: note that the guest user account will generally be prevented from posting content (e.g. forums, calendar entries, blogs) even if it is given the capability to do so.

https://elearning.unipd.it/moodle1/help.php?module=moodle&file=permissions.html&forcelang=en_utf8

In the Linked Heritage course, the role of teacher is assigned also to some e-learning Working Group participants who agreed to collaborate with UNIPD in setting up specific topics of a module.

**Guest Access**

You have the choice of allowing "guests" into your course. People can log in as guests using the "Login as a guest" button on the login screen. Guests ALWAYS have "read-only" access - meaning they can't leave any posts or otherwise mess up the course for real students. This can be handy when you want to let a colleague in to look around at your work, or to let students see a course before they have decided to enrol.

Note that you have a choice between two types of guest access: with the enrolment key or without. If you choose to allow guests who have the key, then the guest will need to provide the current enrolment key every time they log in. If you choose to allow guests without a key, then anyone can get straight into your course.

https://elearning.unipd.it/moodle1/help.php?module=moodle&file=guestaccess.html&forcelang=en_utf8

Users can logging in the Linked Heritage course typing *usereu/usereu* as username and password. The guest access allows users to browse the course (all the modules, topics and learning packages) and to fill in the assessment questionnaires.

**Upload users**

If you are sure you want to import multiple user accounts from a text file, then you need to format your text file as follows: each line of the file contains one record; each record is a series of data separated by commas; the first record of the file is special, and contains a list of fieldnames. This defines the format of the rest of the file. Required fieldnames: these fields must be included in the first record, and defined for each user: username, password, firstname, lastname, email.

https://elearning.unipd.it/moodle1/help.php?module=moodle&file=uploadusers.html&forcelang=en_utf8

This procedure was used to upload evaluation tests participants in the Moodle database for Linked Heritage Courseware.

**Activity Reports**

Activity reports are available for each participant that show their activity in the current course. As well as listings of their contributions, these reports include detailed access logs. Teachers always have access to these reports, using the button visible on each persons's profile page. Students' access to their own reports is controlled by the teacher, via a course setting.

https://elearning.unipd.it/moodle1/help.php?module=moodle&file=coursereports.html&forcelang=en_utf8

The list of the reports generated by Moodle for each participants of the Linked Heritage Course is visible in Figure 2 and 3.

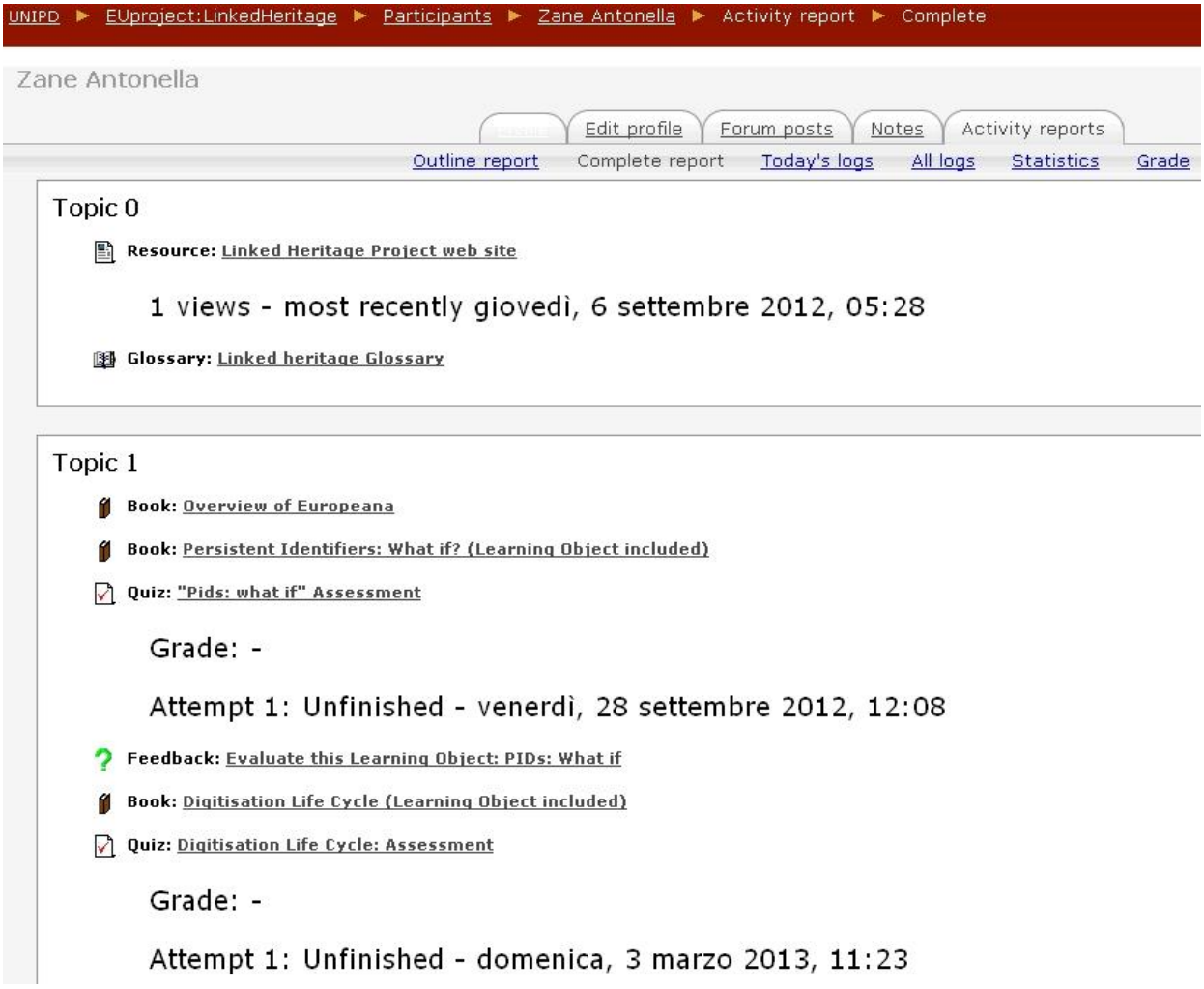



*Figure 4 – Example of Participant Activity Report – Complete report*

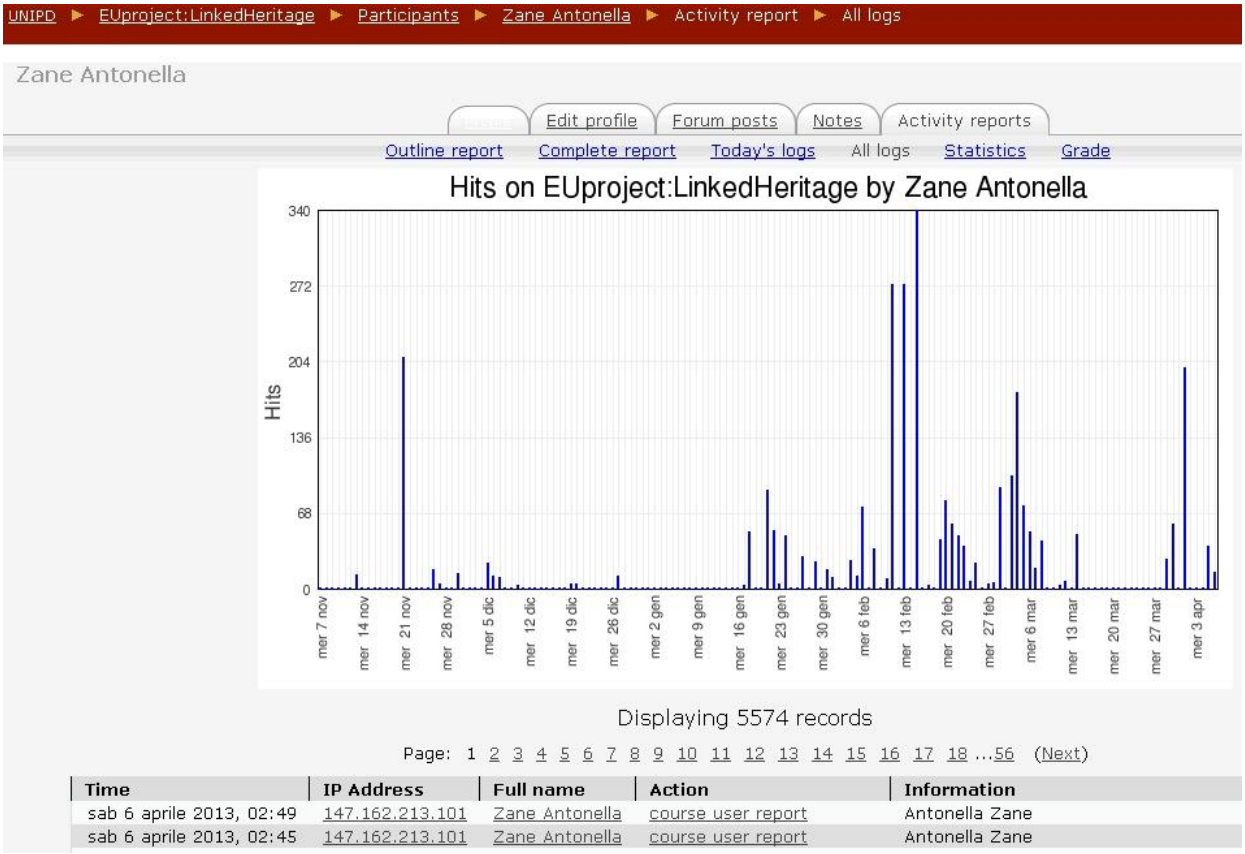



*Figure 5 – Example of Participant Activity Report – All logs*

## 2.4 LINKED HERITAGE COURSE ON MOODLE

The Linked Heritage course is available on Moodle. "*EU project: Linked Heritage*" is displayed in the Front page (Home) users reach after logging in to the course.

*Figure 6 – Homepage*

### 2.4.1 Access to the course

Users can access the Linked Heritage course by:

- logging in with a guest username and password (usereu/usereu) or
- logging in with a personal account.

While the system currently requires a log-in, we are committed to offering login-free access to the Linked Heritage course to guests (including the general public) before the Linked Heritage project ends.

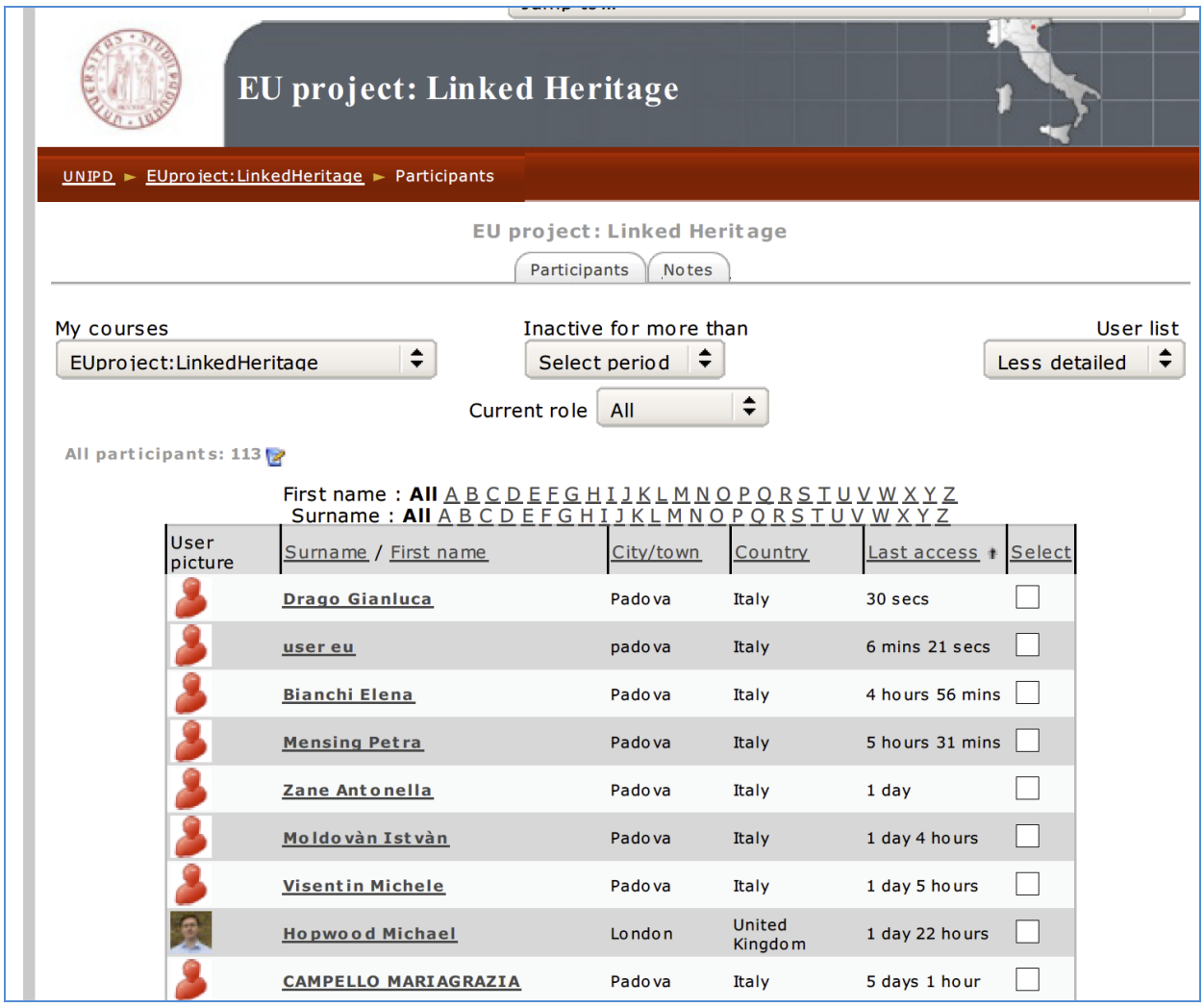



*Figure 7 - Example of users from the participants list*

### 2.4.2 The Linked Heritage courseware structure

The courseware is in English and it consists of **four modules** specifically targeted to the following discrete user groups:

A. Cultural institution managers and decision-makers

B. Teachers, educators, scholars

C. Library Information Science professionals: entry-level students and culture and information specialists from museums, libraries and archives

D. Market players from the private sector

Each module, represented by a box in the course homepage, is composed of a set of topics which has been prepared and selected – in collaboration with the Linked Heritage e-learning Working Group - to be suitable for each target group of users (for more details, please see Linked Heritage deliverable D7.3).

Each topic can be accessed separately. This allows the student to choose his own route through the learning materials and to experience personalised learning.

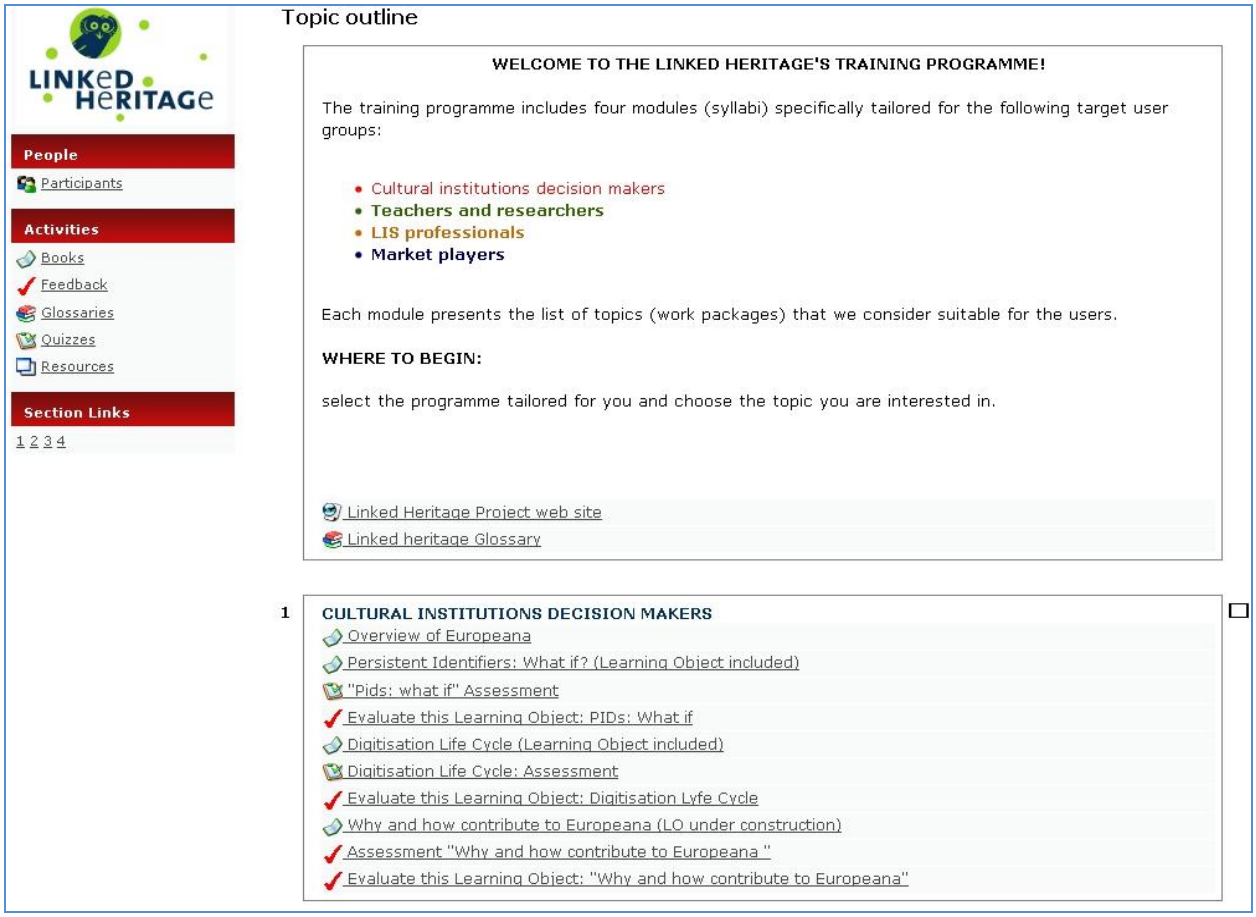



*Figure 8 – List of topics included in module n. 1 "Cultural Institutions Decision Makers"*

Each topic proposes a **learning package**, which comprises:

- Training materials in the strict sense
- Case studies
- Bibliography

Some topics also include a multimedia **Learning Object** that comes with two questionnaires (assessment and evaluation).

A more detailed description of the Training materials included in the Linked Heritage course is presented in Deliverable D7.3 "Training materials".

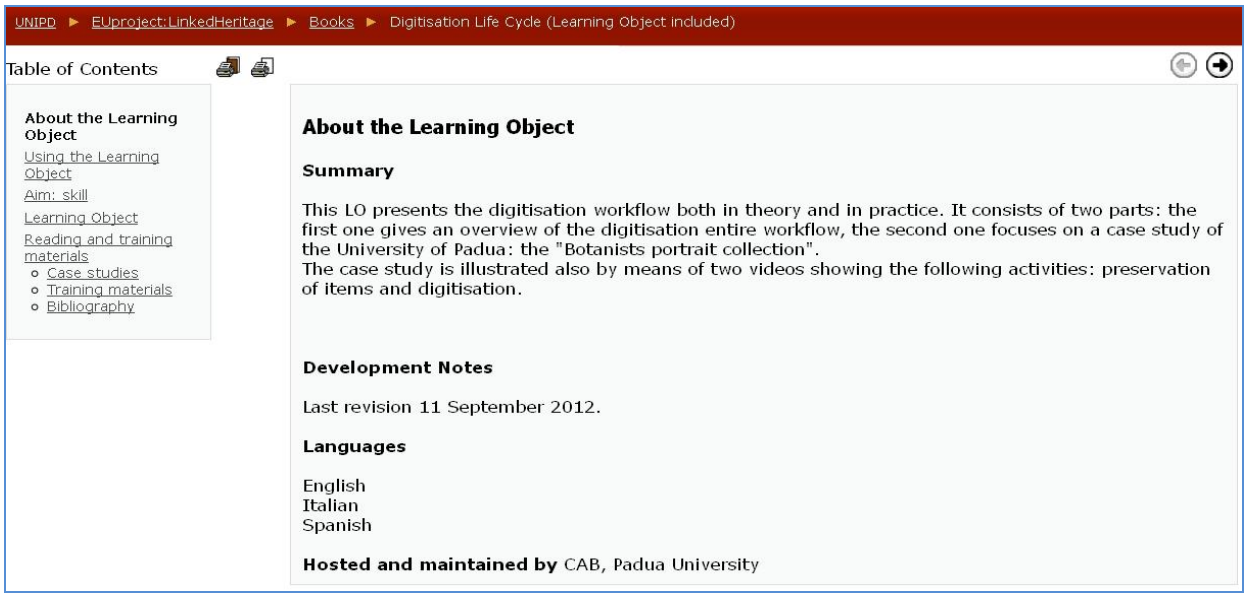



*Figure 9 - Learning Package*

In Moodle, the **Learning Objects**, the **training materials themselves** (public deliverables and booklets created within the LH project; guidelines, manuals edited by Linked Heritage WP Leaders; guidelines, manuals and booklets edited by EU funded sister projects) and the **case studies** are **external resources** accessible through active links edited in the Moodle pages. In particular:

- multimedia Learning Objects are: 1) accessed via the web server of the UNIPD Library System (SBA) and the YouTube videos repository, 2) preserved as ZIP files in PHAIDRA, the digital asset management system with long-term archiving functions adopted by the University of Padua (see D7.3, § 6.6);
- the training materials themselves are accessed through and preserved as PDF files in PHAIDRA
- for case studies and bibliography, a link to the original sources is provided.

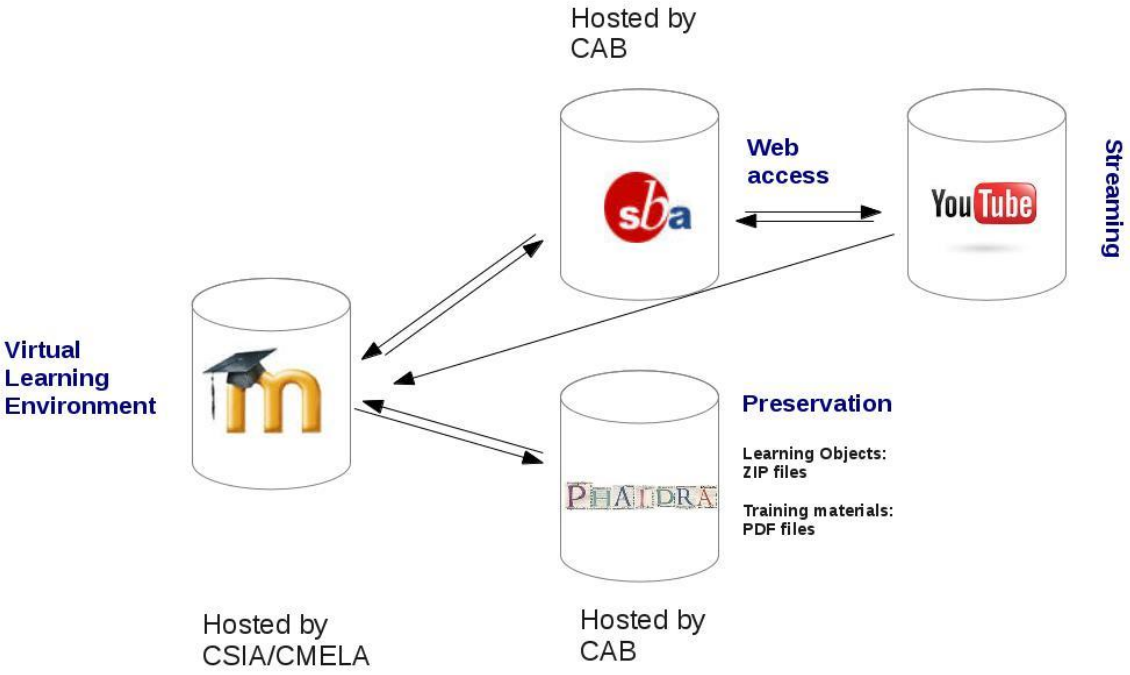



*Figure 10* - schema of Linked Heritage Moodle VLE linked to external resources

### 2.4.3 Which e-learning model?

The following models are taken from Ravotto's which describes online learning methods by positioning them on three axes: two axes identify the presence or absence of relationships with other people. They are divided into:

- relationships with teachers/tutors

- relationships with peers,

A third axis indicates the relationship with contents. This relationship can range , from basic acquisition - based on a transmission model - to content production in a constructivist logic as

- content elaboration.

As Ravotto paper explains the eight corners of the cube in Figure 7 represent different models of e-learning courses (in red the main ones):

A. Self-learning: individuals acquire contents from online materials (without interacting with other people);

B. Assisted self-learning: individuals acquire contents from online materials assisted by teachers/tutors who provide advice, answers and corrections.

C. Non-isolated self-learning: like A but with the addition of forums, chat sessions and Facebook groups that are largely independent of learning activities and provide relief from isolation.

D. Virtual classrooms: a group of students participates in activities with one or more teachers/tutors. Activities include discussions or issue of results of individual exercises to public institutions. Tutors

correct, advise and provide additional explanations and exercises, and students learn also from what their peers do. The group provides motivation and sometimes chat sessions and video-conferences. are scheduled.

E. Informal learning: individuals carry out research and content elaboration independently.

F. Mentor-assisted research and elaboration like, for instance, writing university theses when contacts with supervisors only occur online.

G. Collaboration learning in a community of practice: researchers working on a project.

H. Collaboration learning in virtual classrooms: in addition to transmission activities, virtual classroom courses include research projects, analyses, prototype production, etc.

Ravotto underlines that any of these models is "correct". It depends on the reasons for choosing e-learning and the resources available, and more than one model may be used in the same course.

**LH course is positioned between A and B models**.

In fact, LH course offers self-learning assisted by teachers/tutors who provide organised training materials from authoritative sources, open educational resources created *ad hoc* for the LH syllabus and assessment questionnaires where correct answers are automatically displayed as soon as the student submits his questionnaire. Even if in an automatic way, we think it can be considered as a form of student-teacher relationship.

This intermediate model between A and B can be useful for potentially massive course characterised by wide remote audiences as Linked Heritage course is and we think that Moodle represents a good environment for these kind of projects.

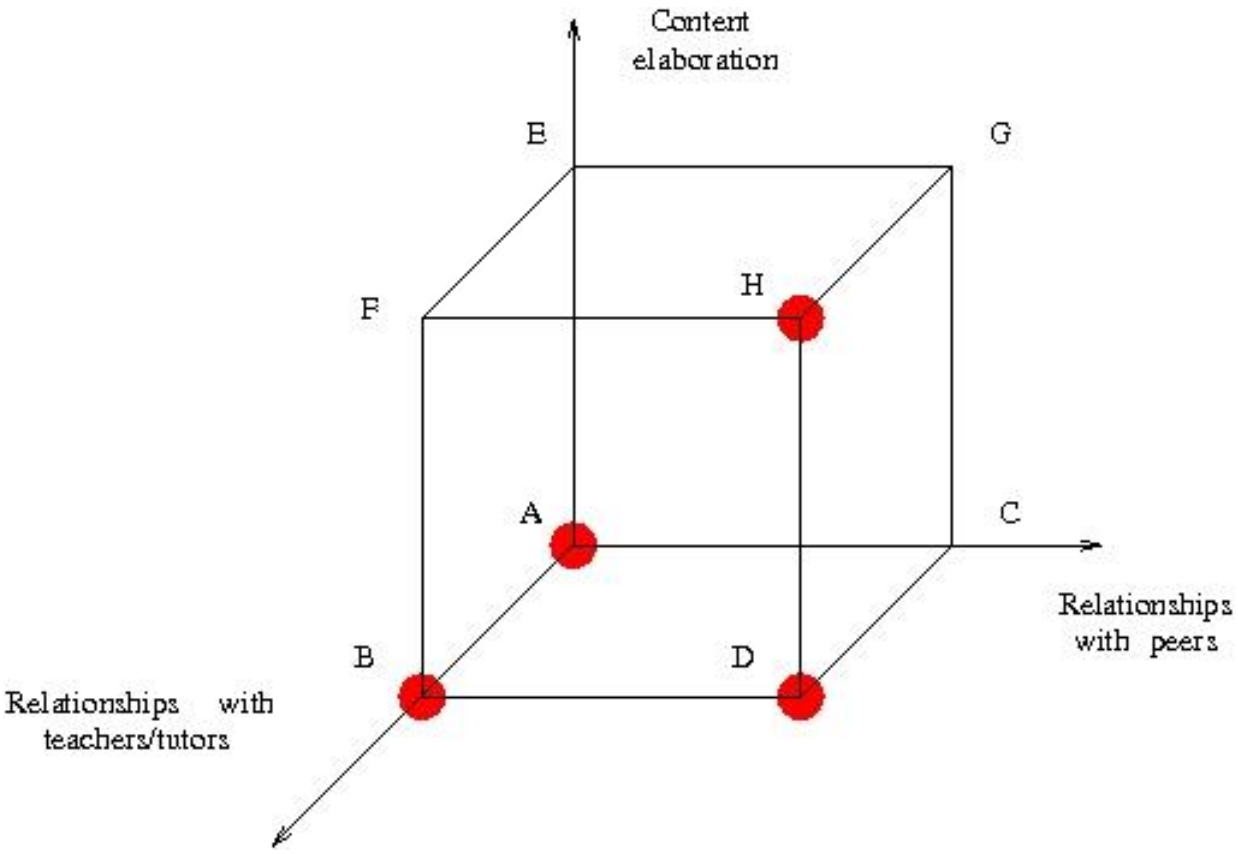



*Figure 11* - the cube of e-learning (based on Ravotto, 2012, p.12)

### 2.4.4 Moodle administration tools used in Linked Heritage course.

*Blocks*

We used "Blocks" to structure the modules tailored for each targeted user group.

Blocks are the separate squares that make up Linked Heritage course page: four blocks in the middle column represent the modules tailored for each targeted user groups:

- n° 1 Cultural Institutions Decision Makers
- n° 2 Teachers and Researchers
- n° 3 Library and Information Sciences Professionals
- n° 4 Market players.

The blocks in the **left** column host:

- LH logo
- People: participants Activities: Books, Feedback, Glossaries, Quizzes, Resources Section Links

The blocks in the **right** column host:

- LH sister project logos and the administration tools list.

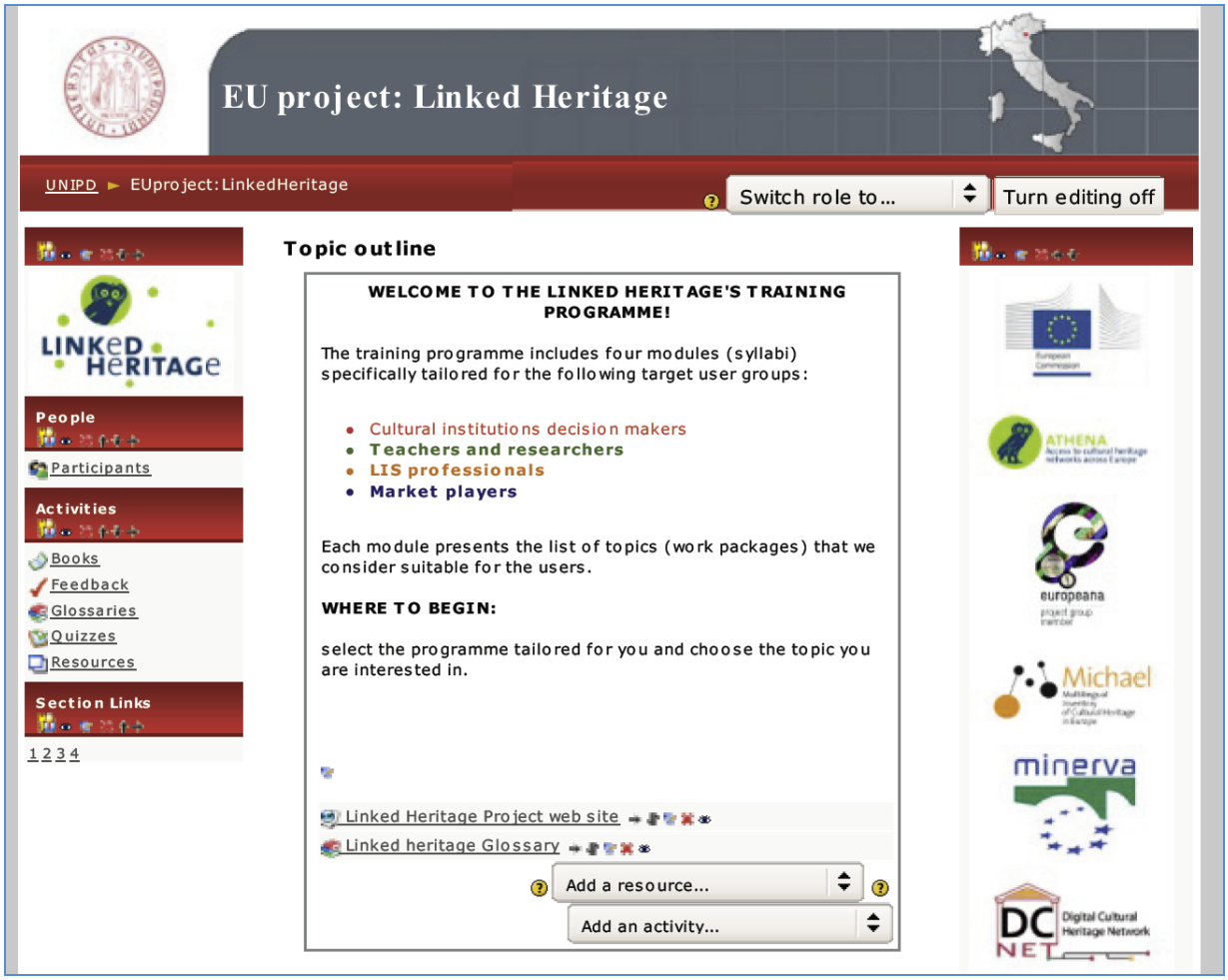



*Figure 12 - Building the Moodle modules*

### *The Book tool*

We used the "Book" tool to structure the learning package for each topic included in a module (see an example in Figure 5).

With the Book tool all the information on a single LO have been tied together in an easily navigable interface which looks like a a book with a Table of Contents, Chapters and Pages. Facilities includes: possibility to browse the pages (next or previous), print a chapter and print the complete book.

### *Quizzes and Feedback tools*

The Quizzes and Feedback modules are used to create questionnaires that can provide information on the user experience and on the progress of the students in the form of statistics. Quizzes and Feedback modules can be filled in online and the results can be tracked and exported to an excel file.

For the Linked Heritage Course, UNIPD used the Quiz and Feedback modules to design questionnaires made up with multiple choice, true-false, and short answer questions (for more details, please see Linked Heritage deliverable D7.3). These questions can be re-used within courses and even between courses. Feedback is given automatically to the users.

### *Course Activity Report*

The Course activity Report shows the **number of views** for each activity and resources. See for example the activity report shown below, which reports on the evaluation test sessions carried out by the project: the total number of views of the activity "*Persistent Identifiers: What if?(Learning object included)"* in Topic1 is 2123 and the number of views of the activity *"Pids: what if?" Assessment* is 193.

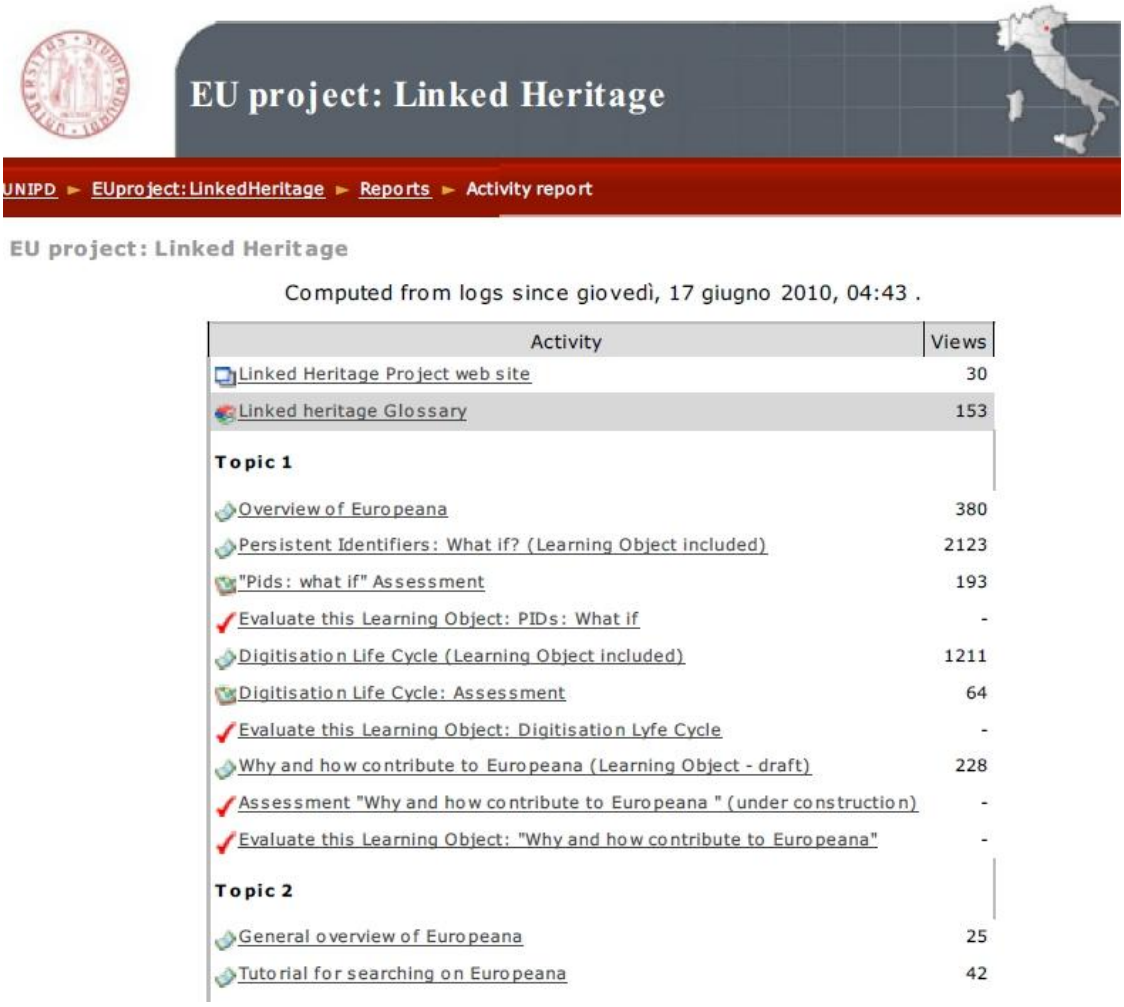



*Figure 13* - Activity report

### *Logs of course activity*

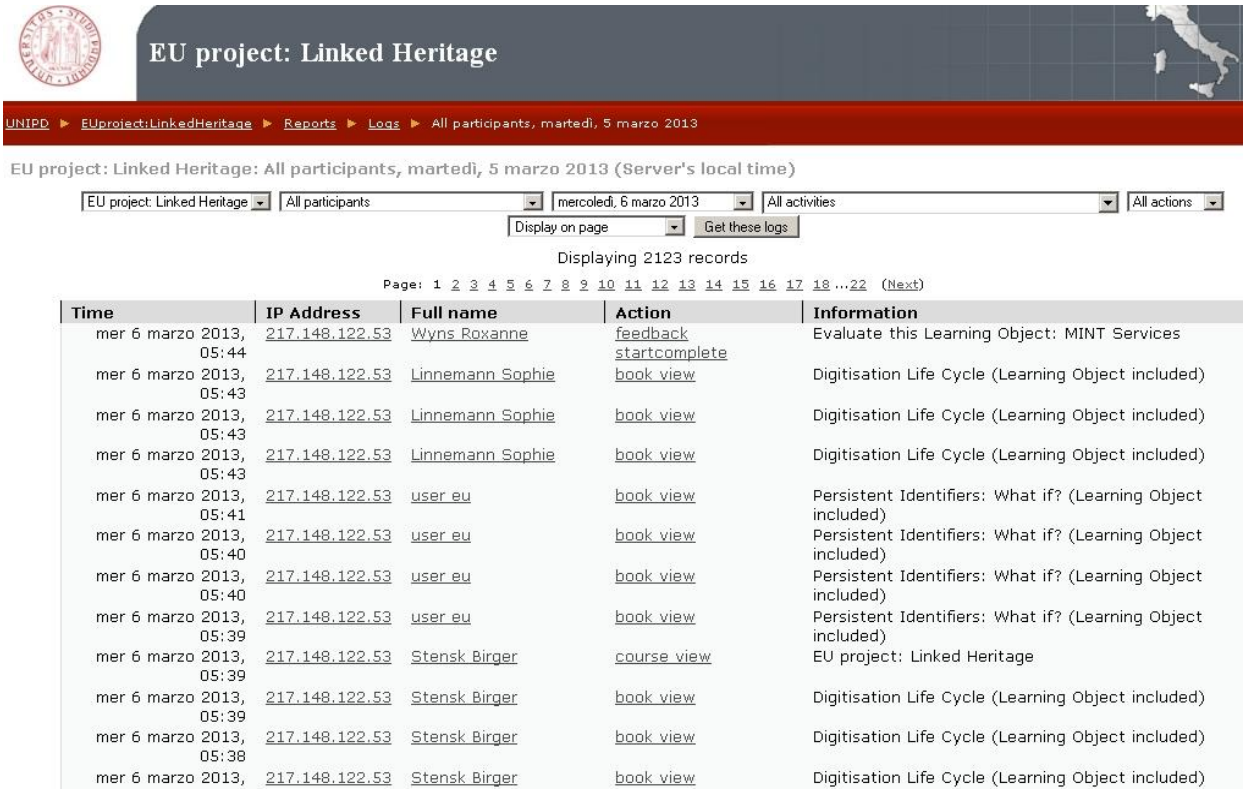
Logs can be generated by a Teacher combining different options: group, individual participant, guest, date, activity, and so provide information about various aspects of the course.

*Figure 14 - Choose which logs you want to see*

Logs can be generated to see what pages the student accessed, the time and date they accessed it, the IP address they come from, and their actions (book view, course view, feedback start complete, etc.) Logs can be displayed on a web page or downloaded in text, ODS or Excel format.

The Logs page contains active links to Geolocation services (IP Address), participants' profile (Full name), pages visited by the participants (Action). Logs analysis reveals that participants attending the

second and third evaluation tests logging in with a personal account, performed their session mainly visiting the learning packages pages (book view is the action with the highest score) and the quiz questionnaires (action “quiz view”). The topics most popular are: Persistent Identifiers and Digitisation Life Cycle.



EU project: Linked Heritage

UNIPD ▶ EUproject:LinkedHeritage ▶ Reports ▶ Logs ▶ All participants, martedì, 5 marzo 2013

EU project: Linked Heritage: All participants, martedì, 5 marzo 2013 (Server's local time)

EU project: Linked Heritage | All participants | mercoledì, 6 marzo 2013 | All activities | All actions | Display on page | Get these logs

Displaying 2123 records

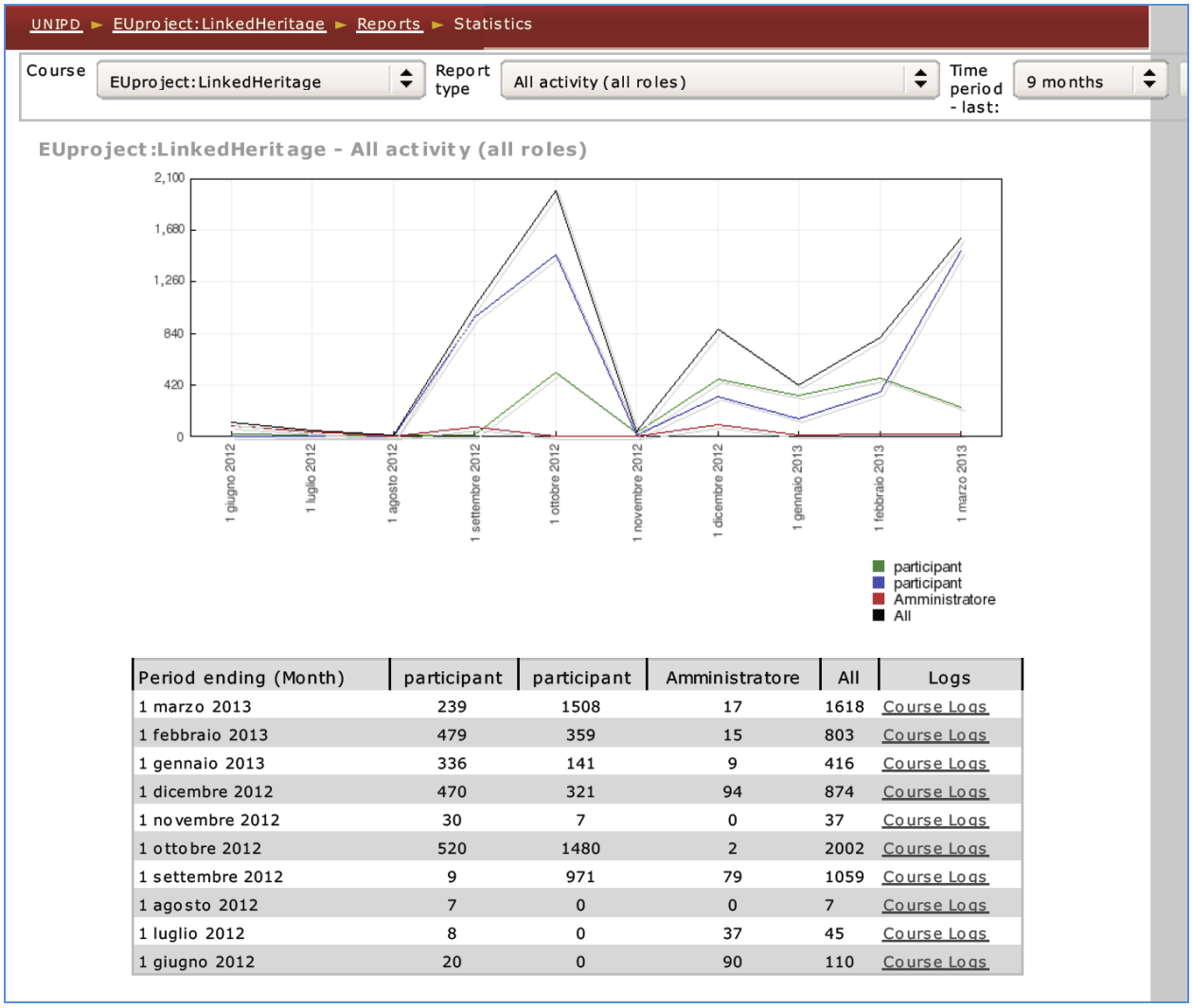
Page: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 ...22 (Next)

| Time | IP Address | Full name | Action | Information |
|---|---|---|---|---|
| mer 6 marzo 2013, 05:44 | 217.148.122.53 | Wyns Roxanne | feedback<br>startcomplete | Evaluate this Learning Object: MINT Services |
| mer 6 marzo 2013, 05:43 | 217.148.122.53 | Linnemann Sophie | book view | Digitisation Life Cycle (Learning Object included) |
| mer 6 marzo 2013, 05:43 | 217.148.122.53 | Linnemann Sophie | book view | Digitisation Life Cycle (Learning Object included) |
| mer 6 marzo 2013, 05:43 | 217.148.122.53 | Linnemann Sophie | book view | Digitisation Life Cycle (Learning Object included) |
| mer 6 marzo 2013, 05:41 | 217.148.122.53 | user eu | book view | Persistent Identifiers: What if? (Learning Object included) |
| mer 6 marzo 2013, 05:40 | 217.148.122.53 | user eu | book view | Persistent Identifiers: What if? (Learning Object included) |
| mer 6 marzo 2013, 05:40 | 217.148.122.53 | user eu | book view | Persistent Identifiers: What if? (Learning Object included) |
| mer 6 marzo 2013, 05:39 | 217.148.122.53 | user eu | book view | Persistent Identifiers: What if? (Learning Object included) |
| mer 6 marzo 2013, 05:39 | 217.148.122.53 | Stensk Birger | course view | EU project: Linked Heritage |
| mer 6 marzo 2013, 05:39 | 217.148.122.53 | Stensk Birger | book view | Digitisation Life Cycle (Learning Object included) |
| mer 6 marzo 2013, 05:38 | 217.148.122.53 | Stensk Birger | book view | Digitisation Life Cycle (Learning Object included) |
| mer 6 marzo 2013, | 217.148.122.53 | Stensk Birger | book view | Digitisation Life Cycle (Learning Object included) |

*Figure 15 - Logs of course activity for all participants*

### *Statistics Report*

The Statistics Report describes the **user activity** through tables and graphs. They show how many hits there have been on the Linked Heritage learning site daily (see example statistics of Linked Heritage course below).




| Period ending (Month) | participant | participant | Amministratore | All | Logs |
|---|---|---|---|---|---|
| 1 marzo 2013 | 239 | 1508 | 17 | 1618 | Course Logs |
| 1 febbraio 2013 | 479 | 359 | 15 | 803 | Course Logs |
| 1 gennaio 2013 | 336 | 141 | 9 | 416 | Course Logs |
| 1 dicembre 2012 | 470 | 321 | 94 | 874 | Course Logs |
| 1 novembre 2012 | 30 | 7 | 0 | 37 | Course Logs |
| 1 ottobre 2012 | 520 | 1480 | 2 | 2002 | Course Logs |
| 1 settembre 2012 | 9 | 971 | 79 | 1059 | Course Logs |
| 1 agosto 2012 | 7 | 0 | 0 | 7 | Course Logs |
| 1 luglio 2012 | 8 | 0 | 37 | 45 | Course Logs |
| 1 giugno 2012 | 20 | 0 | 90 | 110 | Course Logs |

*Figure 16 - From the Statistics report*

### *Glossary Training Module*

At the end of the project another important tool of the VLE will be implemented: a training module dedicated to the Glossary of Linked Heritage. This training programme will publish the definitions of the main concepts required to understand the programme and will be drawn up in collaboration with the project partners. UNIPD is already preparing a list of specialised words with their definitions, which will be sent to the partners for validation and inclusion in the VLE Glossary.

## 2.4.5 Participants' feedback analysis

For the evaluation test sessions we created **personal accounts** and established a user database for the Linked Heritage course.

In these occasions tracked users activities were the following:

1) Connecting (log on) to Moodle;
2) Logging in to LH course with a personal account or guest username and password (usereu usereu);
3) Using the following Learning Objects: Pid's: what if; Digitisation life cycle; Mint services; Why and how to contribute to Europeana;

Filling in the evaluation questionnaire to give us feedback un each LO usability (see D7.3, figure 13).

**58 participants** logged in with their personal account and at least once, browsed the learning content and filled in the evaluation questionnaire.

**6 participants** logged in with the guest account and filled-in a printed evaluation questionnaires.

At the end of the evaluation test sessions we received **59 sets of responses.**

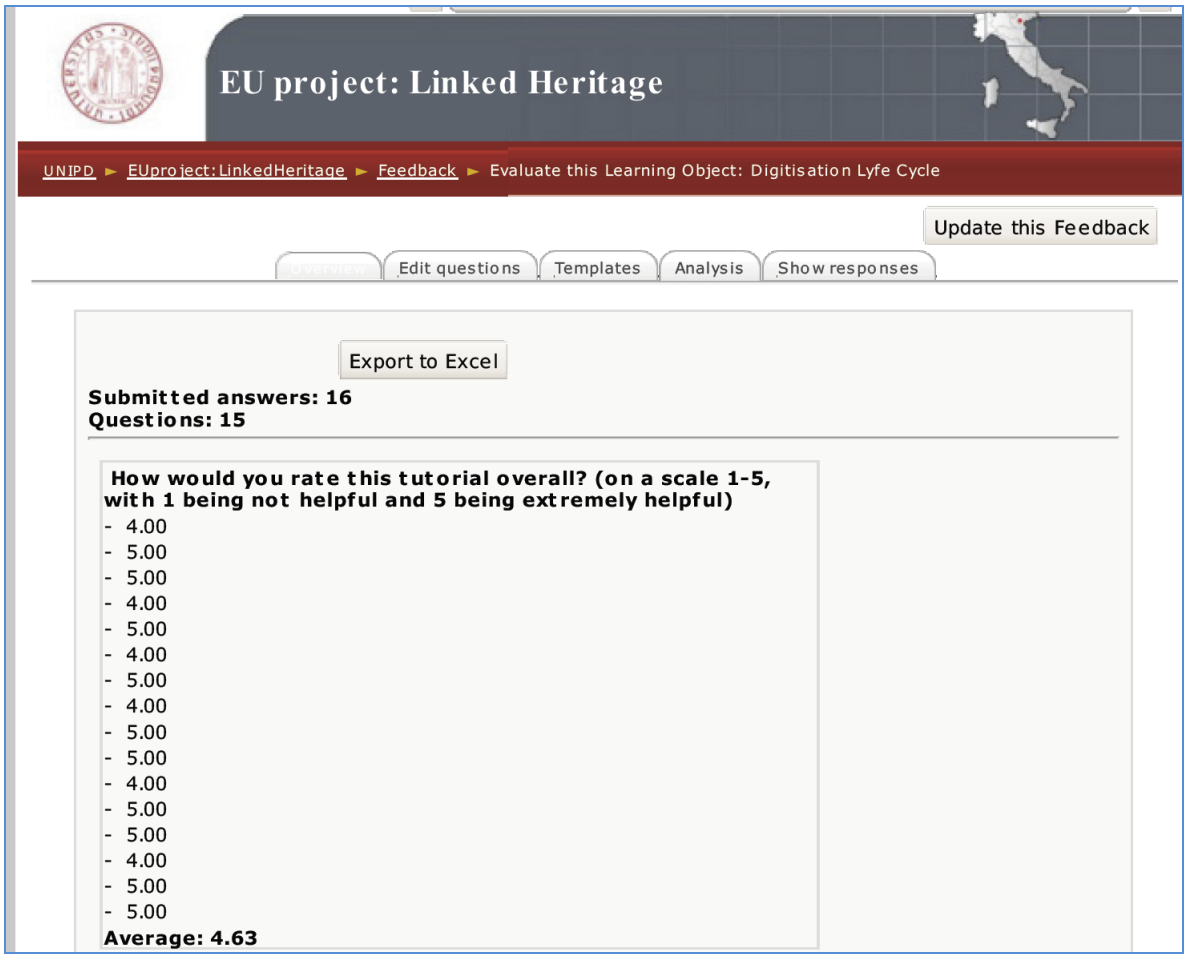



*Figure 17 - Example of user feedback*

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We have already started the analysis of participants' feedback and comments that will be using for the Linked Heritage LOs upgrade. As agreed with the partners at the plenary held in Padua on 8th March, the deadline for this activity is 30th April 2013.

As soon as the LH course will be available on the Moodle version 2.2, we will plan and set up a monitoring program to track, analyse and elaborate all user activities in order to monitor learning behaviors, such as self paced, self directed and exploratory learning.

# *3* NEXT STEPS AND CONCLUSIONS

As of today, all the University of Padua Moodle sites, including the Linked Heritage courseware, are migrating from Moodle version 1.9 to the new version 2.2. This new version presents improved functionalities, a new administrative interface and an innovative user interface with increased reading performance, graphically consistent with the new Web site of the University of Padua.

The updated version of our VLE, specifically customised for the Linked Heritage project needs, will be accessible starting from 30 April 2013.

At the date of this deliverable we are in an intermediate phase of the WP7.2 activities and some things remain to be completed. By the end of the project the following activities have already been scheduled:

- to complete the training programme agreed with WP7 e-learning working group at the Barcelona meeting;
- to enrich the program with new content (LO and related documentation) on the basis of the WP 2-6 results expected for 1 April 2013;
- to refine usage monitoring tools, both those provided by Moodle and the web server log analysis;
- to draw a workflow of LO implementation process to facilitate those interested in reusing and / or modifying the LH LOs, contributing in this way to the maximum dissemination of the LH outputs.

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*http://www.w3.org/TR/WCAG10*