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## **E-LEARNING FOR ENHANCING MANAGEMENT SKILLS**

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### **Abstract**

*The paper discusses design and development issues of an online program for enhancing management skills of Early Years Childcare practitioners. The program is developed in the frames of the EEEYMS\* project by partners from UK, Bulgaria, Finland, and the Netherlands. The purpose is to design an ICT-based flexible learning solution for problem-based learning. The content is organized in nine modules. The learning materials are available online, through the Learnwise Learning Management System, and off-line, on CD ROM. The paper discusses design decisions, structure and organization of learning materials, navigation strategies, and issues related to translation of learning materials into user-friendly electronic format for non-IT specialists.*

**Keywords:** Problem-based Learning, e-learning, widening participation

### **1. Introduction**

#### **EEEEYMS Project**

The EU funded EEEYMS\* project (fig. 1), promoted and co-ordinated by Liverpool Hope University College, is developing online learning materials for enhancing management skills of Early Years Childcare/Nursery Nurse practitioners. The partnership involves the National Day Nurseries Association (NDNA), the Professional Association of Nursery Nurses (PANN) from the UK, the public sector Trade Union KTV in Finland, Avans University in Breda, The Netherlands, and two partners, Virtech Ltd. and the Bulgarian Telework Association (BgTA), from Bulgaria.

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\* Leonardo da Vinci project “European Enhancement of Early Years Management Skills”, <http://www.eeeyms.org/>



Figure 1: EEEYMS project homepage: <http://www.eeeyms.org/>

The project employs the use of computer technologies and communication systems, and in particular, interactive multi-media and World Wide Web. The transition from classical classroom based learning to e-learning delivery provides more flexibility for the learners and enables wider participation, as the delivery will be achieved while participants continue to be active within the workplace. The aim is to enhance the learning experience and the employability factors, as the knowledge will be directly transferable to the work environment.

In promoting the use of web based multi media the project aims to encourage learners as active participants both in the design stage of ODL materials and as participants in the pilot and evaluation stages. Honey (2001) identifies that 'learning has always flourished when it has been actively encouraged and supported'. The learning and assessment will be aligned (Biggs, 1999) to learners everyday work experiences. This type of social interaction, learning and decision making is expected in the workplace today and this approach should promote a desire for and ability for 'life long learning'.

## 2. Overview of the Program

### 2.1. Target group

The program is targeted at the Early Years Childcare/Nursery Nurse vocational group. It is specifically intended to enhance employability of people from this sector by providing access to a high level qualification in line with the emerging industry requirements.

## *2.2. Content*

The program aims at enhancing management skills for Early Years Childcare practitioners. The content is organized in 9 modules, among which: Human Resource Management, Marketing Fundamentals, Understanding and Managing Finance, Understanding and valuing Equal Opportunities, Managing Children's Health, and Employment Law. The content development is a joint effort of the project partners, who are specialists in the management field and in childcare profession.

## *2.3. Pedagogical approach*

Honey (2001) identifies that a common problem with many of the first e-learning programmes is that they simply 'regurgitate pages of text culled from books and classroom courses'. Such a knowledge-transmission model does not suit the EEEYMS purposes, so the use of 'Problem-Based Learning' approach is adopted. It has been found to facilitate the acquisition of professional knowledge along with the requisite practitioner skills (Newble and Clarke, 1986).

The pilot EEEYMS online program is integrated in the Hope University College virtual learning environment Granada's 'Learnwise'. This VLE provides collaborative forums, through which students can take part in asynchronous discussion in small teams and work on specific management and education problems. Wenger (1998) offers a perspective on learning that emphasizes social learning processes within communities of practice where individuals engage in the negotiation of meaning and the mutual construction of knowledge. This contrasts to theories of learning that highlight individual and isolated cognitive processes and where learning is viewed as the absorption of an abstract body of knowledge that stands apart from its practice.

## *2.4. Delivery mode*

The program is intended for mixed delivery – face-to-face and online – using a Virtual Learning Environment and support materials on CD ROM. The pilot group will begin with a residential at Liverpool Hope in September 2005, followed by completion of modules online during 2005/6. The e-learning nature will allow students to work together virtually and study in a flexible way. The initial face-to-face period will provide guidance for using the online and off-line learning materials, as well as the communication forums in the Virtual Learning Environment.

### 3. Design Framework

This section discusses the main design issues for the program. The user profile is the starting point for the design decisions which have been made.

#### 3.1. User Profile

A preliminary analysis of the ICT skills of the potential participants in the program identifies them as having some basic ICT skills and experience with computers, limited to the usage of popular application programs such as word processors and web browsers. This 'non-IT' profile has reasoned further design and development decisions.

#### 3.2. Structure and organization of learning materials

The content of the program is organized in modules. Each module is structured in units (weekly activities) and contains introduction and description of:

- Aims
- Synopsis
- Learning outcomes
- Weekly program
- Recommended Reading List
- Assessments

Each unit has its own *pedagogical profile* (Collis, Nikolova, 1998), defining a set of teaching and learning activities, for example: preliminary activity (e.g. pre-reading of a suggested source), presentation of the new material (e.g. lecture), working on a problem (individually or in a group), collaboration (e.g. discussion), and assessment. The different units in a module can have different pedagogical profiles. Each item (activity) from the pedagogical profile can be associated with certain learning material(s), necessary for completing the activity.

*Common resources* (not associated with a particular module), such as *Student Guide to IT, Electronic books & journals, Overview of Problem-Based Learning*, are also available. They are accessible from each module.

Figure 2 represents the levels in the structure described above:

- Level 1: EEEYMS Program
- Level 2: Modules
- Level 3: Units (Weekly activities)
- Level 4: Learning materials

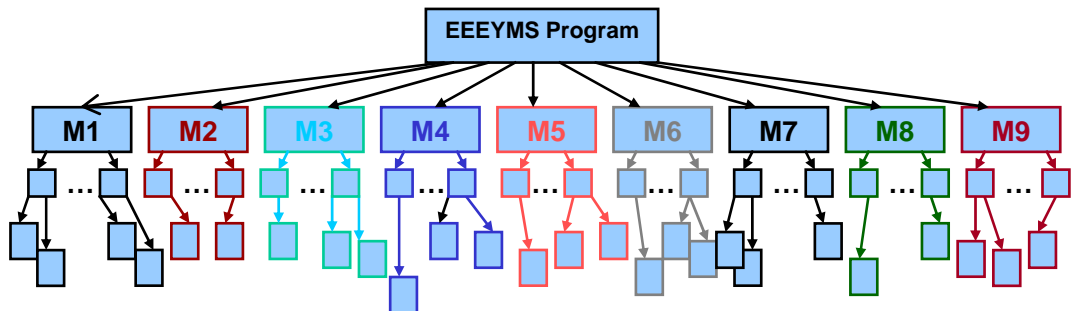


Figure 2: Structure of the EEEYMS Program

### 3.3. Media and technologies

Multimedia and Web technologies have been employed for the development of the course. Four types of media – text, images, audio and video - are used to represent the CD ROM based learning materials. Figure 3 illustrates the CD ROM Flash introduction.



Figure 3: CD ROM introduction

## 4. Course Implementation

The course is built and delivered using the WWW platform and its supporting technologies. JavaScript is extensively used as main instrument for client-side programming.

#### 4.1. Content presentation

The presentation of each module includes a *video introduction* from the module leader; *entry page* with picture, illustrating the module main idea (Figure 4), and links to *Weekly program*, *Problems* and *Common resources*. All modules have a unified graphical design, but different color schemes.

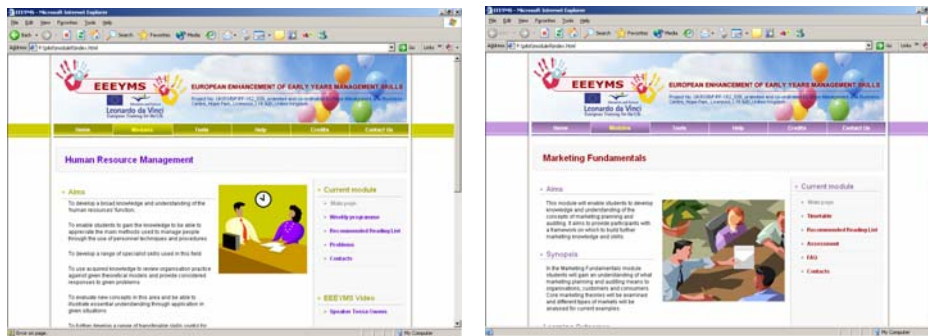


Figure 4: Entry pages for the modules *Human Resource Management* and *Marketing Fundamentals*

#### 4.2. Navigation

The navigation strategy is derived from the previously outlined user profile. The main guideline the designers have followed is to allow the users to navigate through the course in a natural way, not much different from the way they are used to (having in mind their basic computer skills).

The navigation is designed at three levels (fig. 5):

- *Global* – through the Program – via the *horizontal navigation bar* (*Home, Modules, Tools, Help, Credits, Contacts*)
- *Local* – within a Module – via *vertical navigation* on the right side of the page (*Main page, Weekly program, Resources, Problems, Contacts*)
- *Internal* – within a Unit (through the activities for the week)

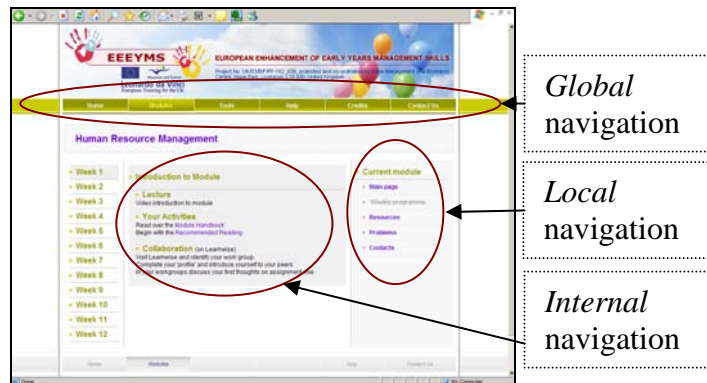


Figure 5: Navigation facilities

The entire functionality of the drop-down navigation (fig. 6) is implemented in JavaScript. This approach improved performance and reduced number of requests.

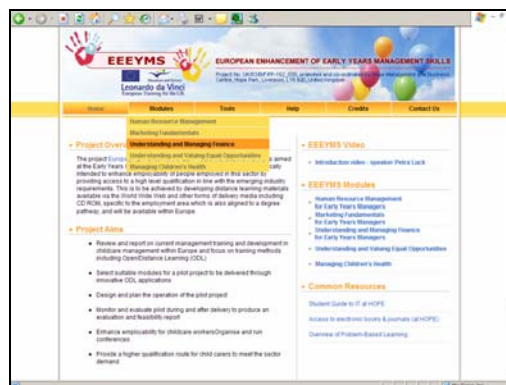


Figure 6: Drop-down navigation

#### 4.3. Job aids

The course development process included virtual collaboration among content providers and developers. The content of each module was provided by the authors as a set of materials (files in different formats – DOC, PDF, PPT, JPG, ...), each having a specific purpose (e.g., for a lecture, for a problem based activity). More than one file could be associated with the same activity. To help the developers interpret the content correctly, a ‘job



aid' – a matrix - was developed, following the course structure, presented at fig. 2, as an instrument for describing the organization of content in a meaningful and unambiguous way. The matrix serves the following purposes:

- structures and facilitates the internal transfer of content between content providers and CD ROM developers
- makes explicit the purpose of each learning material and its association with a certain unit and module
- determines file naming convention and file formats

#### 4.4. Further developments

The online version for the EEEYMS pilot is integrated in the Liverpool Hope Learning Management System GRANADA's LearnWise. A CD ROM version, containing the core materials, is also available. Migration of the program to the LMS used by the other partners - BlackBoard, WebCT, Moodle - is a further challenge to be resolved by the Export feature of Learnwise.

## 5. Conclusion

The EEEYMS online program brings the benefits of technology enhanced learning to learners who are not fluent IT users. The latter has influenced the choices made during the ODL design and development.

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