



COACH BOT

“Modular e-course with virtual coach tool support”

LIFELONG LEARNING PROGRAMME
LEONARDO da VINCI

Coordinated by FOR.COM

*GUIDE international workshop
“New challenges for e-learning in
cultural, scientific and socio-economic
development”*



Education and Culture DG

Lifelong Learning Programme

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Elaborated by	Mikail Feituri FOR.COM.
Conference Name	GUIDE international workshop "New challenges for e-learning in cultural, scientific and socio-economic development"
Date	18th – 19th March 2010

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Conference Objectives

GUIDE Workshop 2010 New Challenges for E-learning in cultural, scientific and socio-economic development organized in collaboration with the Università degli Studi Marconi will offer a general view of the current opportunities coming from the inclusion of digital technologies in the educational and professional sector.

Academic and professional training can play an important role in responding to the current global and economic crisis on the one hand and to meet the increasing need for large scale education on the other. A closer relationship between educational programs and local development can contribute to ensure compliance with the changing labour and social landscape, enhancing the countries development and competitiveness.

The Workshop themes cover many aspects of distance and lifelong learning, including vocational guidance and professional re-training, the role of instructional technology in scientific subjects implementation and the improvement of teachers and universities capacity building in developing countries.

Conference date and venue

18th – 19th March 2010, Rome (Italy)

Conference topics and structure

The conference was structured in a plenary sessions and several specific sessions focused on the following main topics, clustered in four main areas, as follow:

Vocational guidance and professional re-training

New frontiers for postgraduate education: matching the new demands of the market economy

Methodological approaches and different uses of technologies for vocational training

Universities and small and medium enterprises for a sustainable knowledge-based economy

The role of digital technologies for the learning and teaching of scientific subjects

ICT for Mathematics & Science curricula reform and redesign

Teacher training and qualification improvement

Collaborative scenario for mathematical subjects: international networks and partnerships

E-learning in developing nations: problems and prospects

Best practices for e-learning implementation: case studies from Africa, Middle East and Latin America

Teachers and University capacity building

Innovative didactic methodologies transfer

Partnership and Networking in Higher Education

Intervention projects in Developing Countries: professional re-training and social promotion of citizens

Innovations, best practices, and methodological applications

ICT applications in flexible learning: e-learning, blended learning and triple learning

Web 2.0: uses and abuses

Evaluation improving quality and research

M-learning development: theory and practices, software and management system, contents design and implementation

COACH BOT presentation

The COACH BOT project was presented in the framework of the topic “Methodological approaches and different uses of technologies for vocational training” (area “Vocational guidance and professional re-training”).

The presentation of the COACH BOT project was focused on the description of project background and objectives, the course methodology. In detail, the presentation included the description of the

course delivering procedure as well as the description of all interactions between the Virtual Agent “Clara” and the users within the e-learning platform: Guidance interview, Start up quizzes, Customized learning path, Final assessment, Help Desk, Suggestions, Ongoing presence, Case studies.



Some pictures of the COACH BOT project presentation.

COACH BOT dissemination activity

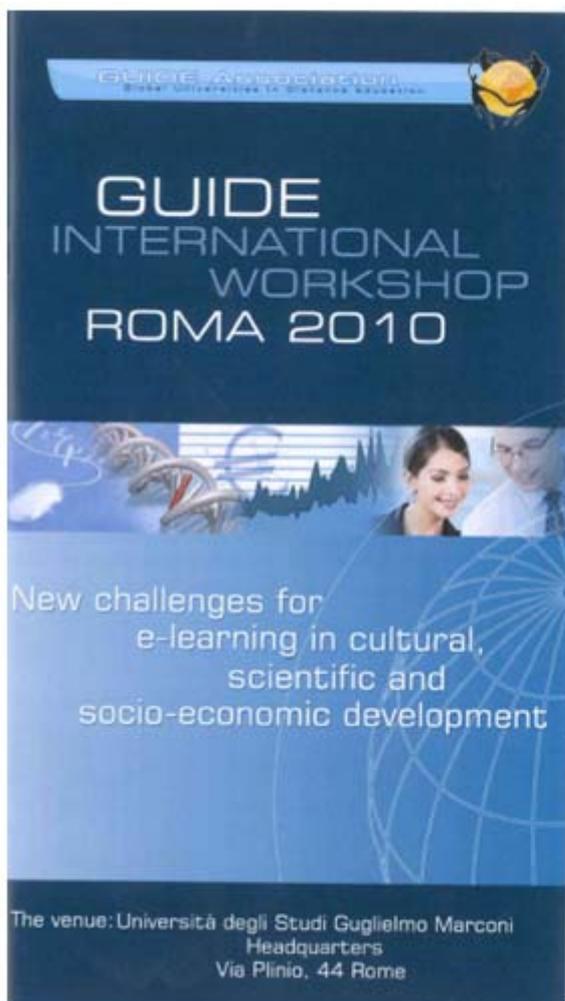
During the COACH BOT project presentation the project brochures were handed out.



A conference participant with the COACH BOT brochure

Annexes

- 1. Conference program**
- 2. PPT presentation**



Università degli Studi "Guglielmo Marconi" • 18 • 19 March 2010. Rome, Italy

Friday 19 March 2010

Session IV

Room 3

11.00 - 12.45

VOCATIONAL GUIDANCE AND PROFESSIONAL RE-TRAINING

Methodological approaches and different uses of technologies for vocational training

Chairperson: Laura Ricci

11.00 - 11.15 **Anthony Russell**

Anglia Ruskin University, Chelmsford, United Kingdom
"Online Learning - to stretch or break the mould?"

11.15 - 11.30 **Robert Pucher**

University of Applied Sciences – Technikum Wien, Vienna, Austria
"The QUADRO Project – Integrating E-Learning Elements with Social Networks"

11.30 - 11.45 **Babafunde Ipaye**

National Open University of Nigeria, Lagos, Nigeria
"Learner support services in ODL: the vocational guidance dimension"

11.45 - 12.00 **Mikail Feizul**

Università degli Studi "Guglielmo Marconi", Rome, Italy
"Intelligent Agents applied to education: two practical cases"

12.00 - 12.15 **Veselka Stoyova**

Technical College of Yambol, Bulgaria
"Improving the quality of education"

12.15 - 12.30 **Sirin Karadeniz**

Bahçeşehir University, Besiktas, Turkey
"An action research on empowering pre-service teachers' information literacy skills through big6 model and project based learning"

12.30 - 12.45 **Discussion**

Lunch

13.30 - 14.30



INTELLIGENT AGENTS APPLIED TO EDUCATION

Two practical cases

Mikhail Feituri

ICT coordinator, International Projects and R&D Office

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Definition of Intelligent Agent, pedagogical agent ant Intelligent Learning Environment

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Intelligent agent

The final definition by Wooldridge and Jennings (1995)

"a software-based computer system that enjoys the following properties:

- autonomy: agents operate without the direct intervention of humans or others;
- social ability: agents interact with other agents (and possibly humans);
- reactivity: agents perceive their environment and respond in a timely fashion to changes that occur in it;
- pro-activeness: agents do not simply act in response to their environment, they are able to exhibit goal-directed behavior by taking the initiative.



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Pedagogical agent

- A particular type of intelligent agent
- Always visible to the user within the educational milieu.
- Takes on human (or humanoid) forms,
- Interacts with the user both verbally and non verbally
- Moves and interacts directly with the learning milieu and within the milieu itself.



"They increase the bandwidth of communication between students and computers, and they increase the computer's ability to engage and motivate students."

Johnson, Rickel and Lester (2000)

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Intelligent learning environment

Definition:
The learning system moderated by a pedagogical agent can be defined as an intelligent learning environment or ILE.

Issues:

- When learners are left on their own, they may not be motivated or engaged enough.
- Students attending E-learning courses need to make many decisions about what to learn and how.
- ➔ This can result in a high proportion of skipped content or dropout rates.

Intelligent agents have the potential to increase engagement and reduce isolation by acting as a tutor or peer.

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COACH BOT PROJECT

Rome, Italy, March 18th - 19 th, 2010



COACH BOT PROJECT AT A GLANCE

TITLE: MODULAR E-COURSE WITH VIRTUAL COACH TOOL SUPPORT

ACRONYM: COACH-BOT

DURATION: 24 months

ELIGIBILITY PERIOD: 1st November 2008 - 31st October 2010

FUNDING PROGRAMME: Lifelong Learning Programme 2007-2013
Sub programme Leonardo da Vinci - Multilateral Projects - Development of Innovation, Call for proposals 2008 (EAC/30/2007)

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Project objective

COACH BOT project aims at designing, developing and testing an innovative e-learning methodology for home healthcare professionals.

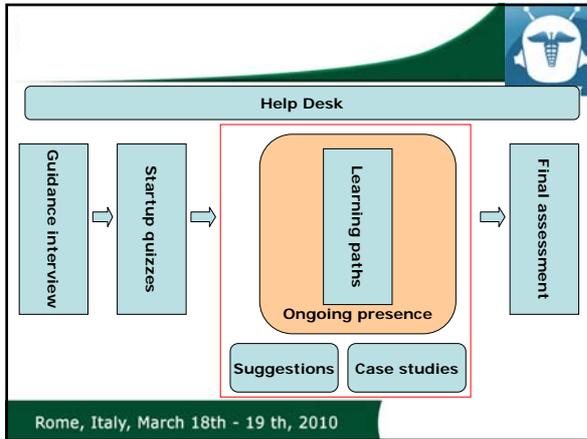
This methodology combines:

- ❖ *Conversational Agent Technology (chat-bot)*
- ❖ *ad hoc designed modular e-learning path*

↓

The "Virtual Assistant" provides learners an effective online assistance/emotional support acting as a *tutor, mentor, teacher* and then it allows to maintain a high level of motivation.

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Guidance interview

- Friendly conversation in order to create a sort of empathetic relationship
- Topics: student's expectation and professional ambitions
- Define a professional profile and consequently a learning path that fit better the student.

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Start up quizzes

- To check the student's previous knowledge and define compulsory learning objects
- The virtual agent presents the quizzes, explains their meaning and comments on the user's results.

learning path

- tracking of the learning objects,
- Virtual agent presents and indicates compulsory or optional learning objects

Final quizzes

- To determine what the student has learned from the e-course
- The virtual assistant comments the learner performance and reinforce its feedback with a facial expression

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Enhancing the European home healthcare professionals' competencies

Modular e-course with virtual coach support

Module title	Start up quiz done?	Module finished?	Final score
Support individuals to access and participate in recreational activities	YES	NO	-
Support individuals in their daily living	NO	-	-
Communication with elderly people	NO	-	-
The relationship with patients family	NO	-	-
Establishing an help relationship	NO	-	-
Introduction to the main home healthcare Worker EU legislation	NO	-	-
Nurse professional code and ethical aspects	NO	-	-
Cultural differences in help relationships	NO	-	-
Self instruction and continuing learning	NO	-	-

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COACH BOT

Enhancing the European home healthcare professionals' competencies

Modular e-course with virtual coach support

Modules

Support individuals to access and participate in recreational activities

Items

- The Care Environment - What types of activities are suitable and possible
- Assess what an individual wants and needs
- Promote Activity

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Enhancing the European home healthcare professionals' competencies

Modular e-course with virtual coach support

Help Desk

- Virtual agent provides users with extensive help concerning LMS functionalities and tools

Suggestions

- To help the user concerning specific course topics
- The virtual assistant can be seen as an interactive glossary or a "quick answer teacher"

Ongoing presence

- To keep learners motivated
- The virtual assistant interacts with each learner throughout the course in different ways by providing ongoing verbal feedback together with facial expressions.

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COACH BOT

Enhancing the European home healthcare professionals' competencies

Modular e-course with virtual coach support

BRALLE is a system of pointing for blind persons consisting of points raised above the surface of the paper used as a substitute to indicate the letters of the alphabet. Reading is accomplished by touching the points with the fingertips.

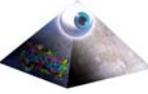
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The natural language processor

- AIML (Artificial Intelligence Markup Language) has been used to give communicative skills to our coach bot.
- AIML enables to input knowledge into chat-bots based on the A.L.I.C.E free software technology.
- Several linguistic patterns have been developed in AIML to make the virtual assistant capable to understand and reply correctly.



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Thank you for listening !

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