



# COACH BOT

“Modular e-course with virtual coach tool support”

LIFELONG LEARNING PROGRAMME  
LEONARDO da VINCI

Coordinated by FOR.COM

*ILearning Forum 2009*



Lifelong Learning Programme

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## INDEX

Conference Objectives and Topics .....	4
Conference date and venue.....	4
Conference themes and structure.....	4
COACH BOT presentation.....	5
COACH BOT dissemination activity.....	5
Annexes.....	6
1. Conference program .....	6
2. Dissemination Material distributed .....	7

## ***Conference Objectives and Topics***

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### Six Tracks

Integrated learning for organisational development and innovation

Integrated learning for employability, social inclusion and active citizenship

Learning innovation and futures

Architectures and infrastructures for integrated learning

Integrated learning with quality management

Exploiting the full potential of digital identity

## ***Conference date and venue***

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19-20 January 2009

Paris

[www.ilearningforum.eu](http://www.ilearningforum.eu)

## ***Conference themes and structure***

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Integrated learning, embedding learning technologies for individual and organisational development. Organised in parallel with RAC2009 (Recognition and Accreditation of Competences).

2500 visitors, 40 exhibitors, 65 international speakers

### ***COACH BOT presentation***

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Abstract submitted, included in conference agenda

### ***COACH BOT dissemination activity***

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1. Talking to other participants regarding the COACHBOT project
2. Paper available for conference participants
3. Paper was available online at the time of the conference

## ***Annexes***

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### **1. Conference program**

**[www.ilearningforum.org](http://www.ilearningforum.org)**

## 2. Dissemination Material distributed

**Title of paper:** COACH BOT - Modular e-course with virtual coach tool support (work in progress)

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**Keywords:** conversational agent technology, Chatterbot or Chatbot, health sector, home health care, coaching.

### **Abstract:**

The COACH BOT project aims at designing and testing an innovative e-learning methodology for adult education that combines the Conversational Agent Technology (chatterbot or chatbot) with an ad hoc designed modular learning path.

The pilot course addresses home health care professionals, such as medical staff, nurses, care workers and doctors, who are the project's direct target group. The long-term target group is the health care sector which is a complicated system that demands extensive resources and consists of a set of integrated services and inter-collaborative health teams. Each position requires a broad skills base and elaborate training encompassing a wide range of functions. Despite growing training demands, the current training system is too slow and inefficient to cope with any new changes.

An IT based learning solution can help solve these problems by providing health care professionals the opportunity to renew and improve their skills by using a flexible approach. Most web-based settings, however, often do not provide learners with ongoing assistance and feedback that can cause them to feel isolated or alone during the learning process which can eventually lead to a loss of motivation. The COACH BOT project attempts to work around these aspects.

The COACH BOT project innovation consists of the development of a collaborative e-learning environment that allows users to communicate and interact with a *chatbot*, called "*Virtual Coach*", through a human-like interface. This new on-line training professional supports participants "individually" during the modular e-course providing them with various kinds of services. The "Virtual Coach" acts as a personal teacher, a coach and a peer assistant providing learners with personal support, in-depth information, assessment, case studies through the storytelling approach, role playing and technical support, as well as promoting dialogue concerning lessons and discussions on course contents. This conversational agent engine will be created by AIML open source technology (Artificial Intelligence Mark-up Language).

The e-course curriculum will be developed according to a *personalised approach* that allows learners to benefit from a training path that is designed based on learners' specific needs. The training contents include several topics concerning medical and psychological issues, national and European health laws and social and ethical aspects of home health care assistance. Considering that each learner has his or her own specific work needs, knowledge and skill requirements, learners have the opportunity to create their own personal training programme. For example, a learner can choose to focus on certain topics while avoiding others or merely study only the basic

information. The “Virtual Coach” interviews and chats with learners in order to create a *student profile* that can help guide them in selecting useful course modules which will constitute their own personal training path. The “Virtual Coach” will ultimately lead each learner through the entire training path, so users are never “alone” during the training process. This methodology, therefore, stimulates and keeps learners highly motivated by providing constant interaction throughout their course of study.

The project work plan includes the analysis of the European health care system’s training needs and the best practices concerning current e-learning methodologies used to renew and enhance medical professional skills. Research results will provide a basis for the design of the e-course curriculum and syllabus as well as the COACH BOT didactic model and methodology (instructional design handbook). The COACH BOT project will follow the design and development of an e-course web-based setting, including an e-learning platform and the “*Virtual Coach*” engine, and the production of modular e-course contents. A group of home health care professionals will then be selected to test and measure the effective benefits of the proposed methodology during the experimentation phase.

The pilot e-course will be delivered in five countries: Italy, Denmark, United Kingdom, Slovenia and Romania. The experimentation methodology foresees the establishment of two test groups: the experimental group will carry out the e-course featuring the “Virtual Coach”, while the control group will follow the e-course without the assistance of the “Virtual Coach”. The comparison between the two groups will provide meaningful data analyzing the effectiveness of the virtual coaching facility.