

# EHLSSA: Europe-Wide Online Learning for Seniors

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## Abstract

Technology dominates the future and it is increasingly penetrating culture and society. In the course of this trend, online learning is gaining importance and becoming a crucial and integral component of lifelong learning. Still, the group of senior citizens is one of the groups that are predominantly excluded from using new technologies, though digital devices provide each citizen with new opportunities and perspectives. The EHLSSA project– European Home Learning Service for Seniors Association – takes this finding as its starting point and develops e-learning solutions for seniors around Europe. The importance and added-value of specially adapted e-learning models for this highly heterogeneous group is presented in this article.

Keywords: senior learners, e-learning, pedagogy and didactics.

## Resumen

La tecnología domina el futuro, y cada vez en mayor medida penetra en la cultura y en la sociedad. En el curso de esta tendencia, el aprendizaje en línea está adquiriendo importancia y se está convirtiendo en un componente fundamental e integral del aprendizaje permanente. Sin embargo, el grupo de ciudadanos de la tercera edad es uno de los principales que quedan excluidos del uso de las nuevas tecnologías, aunque los dispositivos digitales proporcionan a cada ciudadano nuevas oportunidades y perspectivas. El proyecto EHLSSA –siglas de European Home Learning Service for Seniors Association, Asociación de Servicios Europeos para el Aprendizaje de las Personas Mayores desde el Hogar– toma este hallazgo como punto de partida y desarrolla soluciones de aprendizaje en línea para la tercera edad en toda Europa. El presente artículo presenta la importancia y el valor añadido de modelos de aprendizaje en línea específicamente adaptados a este grupo tan heterogéneo.

Palabras clave: alumnos de la tercera edad, aprendizaje en línea, pedagogía y didáctica.

## 1. About Seniors and e-learning in Europe

The concept of e-learning has developed rapidly with the advent of the Internet and new technologies. In the beginning, e-learning was almost exclusively for company employees, but in recent years it has expanded its activity in many areas and it affects a wider audience. Nowadays trainers, university students and academics use this learning method.

Seniors are increasingly seen as lifelong learners, too, and the most recent public involved in e-learning. The fact that they can attend lessons from home is a major advantage for some of them, specially for those with reduced mobility. Also, taking classes in a domestic environment allows them to choose a learning environment, which might be less stressful in some cases. Therefore, e-learning presents a successful and most suitable solution for many senior citizens.

All over the European Union, government bodies and departments have recently produced a number of reports and white papers related to older people in general and to ageing in specific. Whereas previously the matter was mainly seen in the light of health and social care, active ageing is now becoming more and more important. In Finland, for instance, a lot of research has been done in the field of teaching information and communication technologies (ICT) to seniors.<sup>1,2,3</sup> The results prove positive effects on the activity, health and well-being of seniors. In Ireland, a guide for teaching ICT to older people was created within the remit of government funded programs by the national organization Age Action.<sup>4</sup> In Germany, again, several online courses for seniors were successfully performed and evaluated. The results were documented in a series of literature on the importance, effects, and benefits of e-learning for older people.<sup>5,6</sup>

Overall, there is a general trend and need to open up learning opportunities for senior citizens and to develop models, in which technology and pedagogy are well integrated as online learning brings a significant added value to this highly heterogeneous group of elderly people. In the following lines, the EHLSSA project and its approach for developing e-learning solutions for seniors are presented. Further, results of the user profile analysis on needs, interests and the state of affairs regarding seniors and technologies are shown.

## 2. The EHLSSA Project

The EHLSSA project –European Home Learning Service for Seniors Association– aims at providing access to continuing education to seniors through the establishment of a Europe-wide, specifically adapted learning infrastructure: the European Home Learning Service. This learning service includes the provision of a learning management system, training programmes for seniors and measures for tele-tutors to support older people in learning.

The project intends to support and strengthen e-inclusion for seniors by offering new learning opportunities, as many European seniors are excluded from the digital world. Either in formal or informal settings, digital competencies provide seniors with skills that enhance individual empowerment and participation in society. Access to learning and life skills programs will be guaranteed by the development and implementation of a sustainable and comprehensive learning infrastructure.

The European Home Learning Service will be established in five European countries (Finland, France, Germany, Ireland and Spain) with national and regional contact points. In the long term, the offer shall be extended to further European countries while also increasing the range of courses.

The project focuses on three main development areas, described as follows:

1. Development of three e-learning courses specially adapted to the needs and interests of senior citizens, following a carefully designed didactic concept. The aim of the online courses is to enable older people to acquire know-how and skills when dealing with ICT. The course topics are selected according to the interests of the target group, which are derived from the results of the user needs analysis (see heading 4). The didactic approach is based on immediate use and transfer of skills learned, with regular practical trainings and repetition possibilities to consolidate skills already acquired, and on continuous feedback.
2. An open source learning platform is developed to serve as the host for the training courses. The surface of the learning platform is adapted to the target group, strictly respecting its pedagogical and usability needs. The screen layout is clear and easy to handle; it only provides necessary information. To reduce potential fears and to ensure

competent handling of the learning environment, an introduction to using the platform is given. At the beginning, senior learners learn how to display the content and how to navigate through the modules. The learner is shown how to handle embedded media, i.e. simulations, demonstrations, interactive elements or audio and video clips. For a better understanding, online training and several exercises are provided. Finally, the use of communication facilities available within the e-learning platform (i.e. forums, e-mail, chat) is explained. All these components are thoroughly explained and assisted.

3. In the training phase, in-depth support related to the content, technical aspects and motivational factors are provided by the support team consisting of project managers and tele-tutors. The latter are seniors themselves having completed a special training course on how to assist learners in their learning process, how to provide feedback and how to moderate discussions in the forums. Further support elements are provided through feedback and self-training features as well as complementary sound and visual elements to compensate physical impairments. Interactive elements are designed in such a way that they are clear and self-explanatory.

### 3. Pedagogical and didactic approach

The model that is used for EHLSSA is the e-learning cube model, developed by Paul Held in 2004.<sup>7</sup>

The cube consists of different sides that are all connected to the learner and the learning process. The sides are defined in order to create a successful learning approach. The cube model describes different important parts, which are part of e-learning and should always be considered, and also the relation and organization of these parts in relation to each other.

In the model, the learner is placed in the inner part of the cube and surrounded by five different sides: content, technology, support, quality and didactics/methodology. These sides are again surrounded by the also meaningful parts of this model: organisation, economy and valorisation/evaluation.

Every side can be split up in as much fields as necessary regarding the special context and/or needs/requirements of the e-learning course. Here are some examples of aspects which are relevant for the different sides/parts of the cube:

- Learner (nucleus): potentially relevant factors are age, gender, intrinsic/extrinsic motivation, number, prior knowledge, digital literacy level, organic/physical disabilities/problems, etc.
- Content: consists of curriculum, authoring, pedagogy and didactics, learning approach, knowledge creation, media theories/didactics, pedagogical approaches, etc.
- Technology: includes software, hardware, bandwidth, system, etc.
- Support (and communication): contains tutor(s), communication channels, synchronous and asynchronous approaches, peer-group building, human support (tutoring and community support), technical support, etc.
- Organisation: contains all actions to be taken for quality management, embedding, course and learning management, acquisition of learners and tutors, training and quantitative or/and qualitative system evaluation.
- Economy: contains all aspects of learning and training economy (e.g. effort, time, money), variable and fix costs, economy of scale, preparation and running costs.



Figure 1. E-Learning Cube Model

- Valorisation/evaluation: includes all activities and tools for a qualitative/quantitative summative and formative evaluation of the system. Evaluation includes not only the learners, but also all other people involved in and related to the e-learning environment, i.e. tutors, course organisation, technical support, etc.

EHLSSA courses will focus on experimental and active learning, including a series of real life examples and the connection of each learning unit with the daily life of seniors. Therefore, the learner is always aware of the relevance of the learning content for her/his life. The structure of the online modules is based on a step-by-step approach and integrates different types of media.

Based on the vast experience of ILI, the principle for every learning unit will contain at least the following basic elements:

- A short introduction with the description of the aims of the unit.
- Definition of terms which belong to the topic.
- Description of contents by means of various illustrations.
- A summary at the end.
- Usage of interactive exercises in order to test one's gained knowledge/experience.
- Feedback for the user regarding his/her results reached in the exercises.
- Feedback survey asking the opinion of the user regarding different aspects of the unit.

#### 4. Results of the user needs analysis

Being a project with a user-centred approach, a user needs analysis is essential as the basis for the development of learning materials but also for the methodology and pedagogy of the online courses. The questionnaire aims to find out the current use, skills and motivation on computer, Internet tools and services, and also the experiences and motivation regarding e-learning for senior citizens. Here it was particularly interesting to see which fears and barriers senior citizens face when it comes to learning online and how e-learning providers can counteract.

Both face-to-face interviews and surveys on paper were provided to people above the age of 55. Quantitative questions were designed to know the main ICT-level and preferences statistically, while qualitative questions were aimed to explore opinions or suggestions about certain questions.

In total, 187 seniors participated in the survey. Only 12 percent out of them mentioned that they are not able to use a computer and access the Internet independently. The majority of the respondents own a computer, tablet or smartphone.

#### *Interests and use*

The topics and programs seniors are most interested in and that are mainly used are:

1. Surfing the web (59 %)
2. Information seeking/Research (55 %)
3. E-Mail (45 %)
4. Reading news, watching videos... (43 %)
5. Writing texts using word processors (43 %)
6. Organising pictures (42 %)
7. Google + (34 %)
8. Online shopping (31 %)

Both little interest and little knowledge exist for the following themes:

1. Domotics (26 %)
2. Self-directed writing in a Blog or a wiki (21 %)
3. Cloud services (21 %)
4. Google+ (20 %)

#### *Obstacles and difficulties*

The question on obstacles and difficulties in the usage of digital devices and online services was analysed separately for seniors with ICT experience and those without.

The major barriers for non-ICT experienced seniors when using digital technologies are related to economic factors (price of devices) and individual capacities (diseases, mobility reductions, visual impairments or limited dexterity). More personal reasons are related to lack of knowledge, lack of technical understanding, fear of digital devices and the Internet, and fear of dependence.

Seniors with ICT experience, however, consider problems with specific tools and services (i.e. the file management and organization of the computer, security risk caused by viruses) the main barriers when using digital devices and going online.

Despite the differences, there are common topics identified as obstacles for both groups. Finding support to solve doubts or finding a solution when they do not find a file or have a question seems to be the main concern for seniors both with and without ICT-experience.

## 5. Conclusion

As a conclusion, the EHLSSA consortium can definitely state that promoting digital competen-

cies among senior citizens is an important element of supporting older people in active ageing and in becoming full members of today's knowledge and information society. Particularly because seniors are a very heterogeneous group, specifically adapted pedagogical and didactic approaches need to be developed and applied.

The EHLSSA project embraces this challenge and develops online courses in which ICT competences are taught while learning content at the same time. In an initial step, a needs analysis with the target group was conducted; the next step is to develop the course contents.

The courses will run in the beginning of 2016 and their evaluations will contribute to further develop learning and teaching methods for senior citizens in an online environment.

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