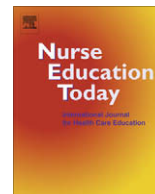




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The LEONARDO-DA-VINCI pilot project “e-learning-assistant” – Situation-based learning in nursing education

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SUMMARY

E-learning will play an important role in the training portfolio of students in higher and vocational education. Within the LEONARDO-DA-VINCI action programme transnational pilot projects were funded by the European Union, which aimed to improve the usage and quality of e-learning tools in education and professional training. The overall aim of the LEONARDO-DA-VINCI pilot project “e-learning-assistant” was to create new didactical and technical e-learning tools for Europe-wide use in nursing education. Based on a new situation-oriented learning approach, nursing teachers enrolled in the project were instructed to adapt, develop and implement e- and blended learning units. According to the training contents nursing modules were developed by teachers from partner institutions, implemented in the project centers and evaluated by students. The user-package “e-learning-assistant” as a product of the project includes two teacher training units, the authoring tool “synapse” to create situation-based e-learning units, a student’s learning platform containing blended learning modules in nursing and an open sourced web-based communication centre.

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Introduction

E- and blended learning units are educational programmes based on the structured involvement of electronic media. These form basic tools for future learning strategies not only at the university level but also in the field of vocational training. Even though e-learning is independent from time and place, offers flexibility and a wide choice of programmes from an international market, computer-based learning does not gain acceptance all over Europe. While in some of European countries e-learning is a crucial part of the training portfolio in higher and vocational education, in others e-learning programmes are not well established (Marry,

2005). In a changing field of health care with new professional challenges, IT skills are strongly needed to fulfill the requirements of computer-based documentation and information (Scott et al., 2008). While there is a broad range of products developed for computer-assisted skill training of medical students (Choules, 2007), e-contents especially tailored for the nursing education are lacking or not accepted by nursing teachers and students. This may due to lack of proper didactical and pedagogical approaches, user-friendly learning platforms and adequate approaches to integrate e-learning units in the curricula (Childs et al., 2005). Since nursing teachers as well as students may have poor knowledge or fear the use of new media, there seems to be a need to improve competencies in both groups (Christian, 2003). Suitable technical equipments, adequate e-didactical approaches adapted to the specific needs in nursing education and IT training programmes for teachers and students are needed to ensure a valuable implementation of e- and blended learning programmes in nursing education (Muirhead, 2007). Blended learning as a mixture of well-matched e-units and face-to-face lectures (Garrison and Kanuka, 2004) are well-suited to equip nursing students with nursing contents and to improve computing skills.

The LEONARDO-DA-VINCI programme, funded by European Union, aims to complement the teaching and learning methods of people that are involved in vocational education and training in the European Union. According to the “Strategic framework for European co-operation in education and training, Update 2008”

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(EU, 2008), the LEONARDO-DA-VINCI programme should contribute to the harmonisation of education systems of EU member states based on comparable qualifications. From 2003 to 2006 the programme focused on new applications in e-learning (EU, 2003). Transnational partnerships were invited to submit proposals for pilot projects that promised new e-products and tools to improve vocational education in the EU member states. This was the starting point for the LEONARDO-DA-VINCI pilot project “e-learning-assistant” addressing blended learning in nursing education.

Aims of the project

The overall aim of the project was to create new didactical and technical e-learning tools and learning materials to improve media competencies of teachers and students and to facilitate the application of a web-based learning in nursing education.

In particular, the project had the following objectives:

1. Teachers working in nursing education should be able to adapt, implement, create and evaluate blended- and e-learning materials without advanced knowledge in computer programming.
2. A web-based user-package should be developed that provides a compact set of components that are necessary to implement blended learning in educational settings of nursing. A transnationally applicable user-package in computer-based learning that should be suitable for beginners as well as for advanced persons.
3. In addition to these tools for teachers to develop and implement e-learning units the user-package should include a learning platform for students where these e-learning units could be accessed.

Structure of the project

Project group

The LEONARDO-project brought together a skilled team of teachers in nursing education from Belgium, the Czech Republic, Germany, Finland and Latvia and Poland as well as two IT companies based in Germany and Great Britain.

The project was co-ordinated at the University of Applied Sciences at Bielefeld, Germany. This centre was involved in a forerunner project aimed to modularise nursing education (Knigge-Demal and Nauerth, 2003) and is therefore experienced in the field of e-learning and modularisation. To promote entrepreneurship and improve exchange of experiences between companies and educational institutions LEONARDO-DA-VINCI project partnerships are obliged to involve small and middle enterprises (SME) (EU, 2005). Therefore two IT companies from Germany and Great Britain, skilled in technical development of IT based educational tools were responsible for technical development. Other partners were from different public and non-profit educational settings, such as nursing schools, universities and higher education centres for nursing. IT companies were funded by the EU following agreement to the rules of dissemination ensuring open access of the project products via the internet.

Work packages and project organisation

Based on a route chart, featuring milestones to characterize sub-goals, tasks were assigned to the partners by the co-ordination centre (Fig. 1).

The co-ordination centre was responsible for the overall management of the project, including communication, arrangement of workshops, budget administration, documentation and the pro-

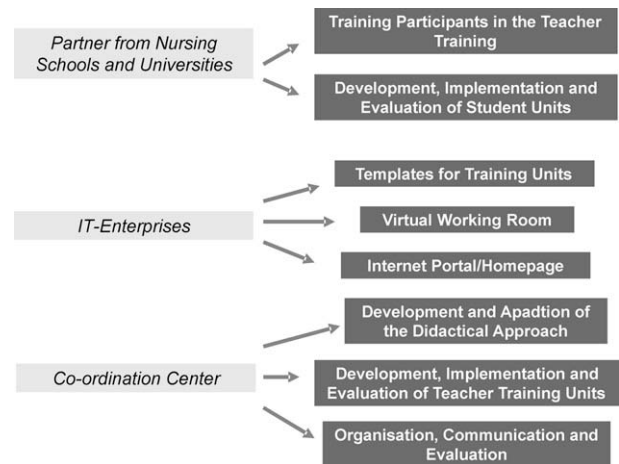


Fig. 1. Work packages of the partner within the project.

cess evaluation of the project. Additionally, the co-ordination centre was responsible for the development in of the e-didactical approach, the development of teacher training units in e-learning and the construction and validation of evaluation tools.

Templates were created by the IT enterprises to build up e-tools for e-unit development and learning platforms containing e-units and evaluation tools. Additionally, the companies provided technical tools for the internet presence and the intranet.

Joint teachers working in the partner institutions were responsible for the development, implementation and evaluation of blended learning nursing modules in their institutes based on the techniques provided by the “e-learning-assistant”.

Working process

Starting with the conceptual and technical development for core facilities of the “e-learning-assistant”, the co-ordinators laid foundations for the subsequent training of teachers in e-learning. Based on a situation-based learning approach, two teacher training units have been created to promote e-learning competencies in teachers.

The first unit addressed strategies on how to implement blended learning modules within the setting of nursing education. In the next phase teachers should act as learners within the project applying the freshly acquired knowledge to adapt and implement blended- and e-learning units. Based on these experiences the second unit aims to train teachers in the development of blended learning nursing modules. Subsequent to the application of these materials in student courses the products have been evaluated to elucidate benefits and deficits (Fig. 2).

To acquaint joint teachers with the underlying principals of blended- and e-learning, the teacher training modules were also constructed as blended learning units: the e-learning units were provided online by the “e-learning-assistant” and completed by workshops conducted in the co-ordination centre. Thereby teachers were enabled to acquire their own experiences in a “learning by doing” process guided by the co-ordinators acting as tutors on the whole process (Fig. 1).

Evaluation of the process and the products

LEONARDO-DA-VINCI pilot projects are obliged to evaluate the project and document and control the work progress. According to the parameters given by the programme guidelines evaluation of the working progress and the project products should include all persons that were involved in the project activities.

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