

Pedagogical Considerations on eLearning of Older Persons

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ABSTRACT

Pervasive and enduring consequences of demographic changes and an ageing European population present enormous opportunities as well as enormous challenges for European society. Initiatives for lifelong learning have yet not sufficiently taken into account the specific needs of senior citizens. Technologies are recognised as relevant platforms for information and communication as well as important instruments for teaching and learning. Nevertheless the design of courses and information- and communication technologies (ICT)-enhanced training of elder persons in this field still remains a challenging task which has not yet met the goals in terms of the identification and application of effective methods which could support learning. Especially the Internet and “virtual learning environments”, electronic environments designed to facilitate instruction for elderly via the web, are at present very much in their infancy in terms of the uses to which they are put. Many environments have been developed but few work entirely satisfactorily because they are not designed or used appropriately. Too many products are limited to mere content delivery, ignoring the opportunities for improving the quality of the learning process and the communication between “teacher” and “learner” that web-based learning can afford, and in particular the enormous potential for collaborative interaction. More work is still needed in terms of adequate implementation of technology and pedagogy, as well as new organisational requirements and potentials for education – adapted to the specific needs of senior citizens. This paper attempts to present a pedagogical view on how to effectively support elderly learning needs with ICT and consequences for DfA approaches.

1. GROWING IMPORTANCE OF (E-)LEARNING FOR OLDER PERSONS

The structure of societies is changing due to unprecedented demographic changes. One of these challenges is the changing habits of older persons towards learning. Still older persons (in most studies referred to as “50 years and older”) show less participation in training and learning activities compared with younger persons (for Germany confer BMBF 2005, 25). However, authors such as Iller refer to upcoming new generations of older persons that have grown up in an environment characterized by continuous learning. She prognoses a change in the proportion of older persons participating in learning activities in the near future, making it necessary for training providers to adapt to the changing groups of customers and their needs and habits (Iller 2005, 312).

In parallel these groups are acquainted to ICT-based learning (in formal and informal learning settings) and increasingly articulate their interests using technologies for learning purposes. Bubolz-Lutz (Bubolz-Lutz 2004) points out that already 8% of persons 60 years and older learn by using media. She states, that introductory courses on using the internet are often sold out and there are waiting lists and the number of internet users of 60 years and older is growing rapidly. Additionally she identifies an emerging communication culture among older persons who use electronic media in order to overcome and compensate restrictions in mobility: Keep in contact with friends, retrieve

news, organise post and formalities, or do the shopping without leaving the house - all via the Internet (Stadelhofer 2002).

The growing importance to develop more suitable learning settings for older persons is even more pressing taking into account the continuously rising number of persons participating in eLearning activities and the change of learning settings at the workplace. There is a constant pressure in most business sectors to keep the know-how up-to date in order to compete on the labour market. Most training of these learners therefore is focused on training activities centered around work related issues. Whereas older learners in enterprises are most often embedded in working learning cultures, training plans and get active support from different sources (e.g HR-department), following retirement a shift in the interest as well as in the purpose of learning is observable: Personal interest, self-fulfilment and most important, social activities gain of importance. Learning is often used as a “tool” in order to stay in social contact with others during courses. Clearly, different approaches are needed for these learners.

2. PEDAGOGICAL REQUIREMENTS

Iller (2005, 91f) points out to conceptual problems in pedagogy that have long focused on a model of a “fluid” pedagogical state during adolescence and a “fixed” state relevant for adult learners. She criticises that these presumptions are mainly based on a biological-mechanic understanding of learning. According to her opinion the same applies to learning-curve-models and stage-models which point out to maximum learning capacity between the age of 20 and 50. The status of an adult learner therefore generally is understood as being in a mature, if not in a decline phase. In recent years this view has been altered by positions taking into account the socio-economic factors. Furthermore it has to be noted that the effects of ageing can be detected throughout most of a person’s life with a reduction in capabilities being for the large part of a gradual nature, the most severe problems tend to only occur with the frail or extreme elderly who are likely to be aged 75 years and over. However, some trends are apparent and they do have clear implications for design. These include the aspects outlined in the graphic below

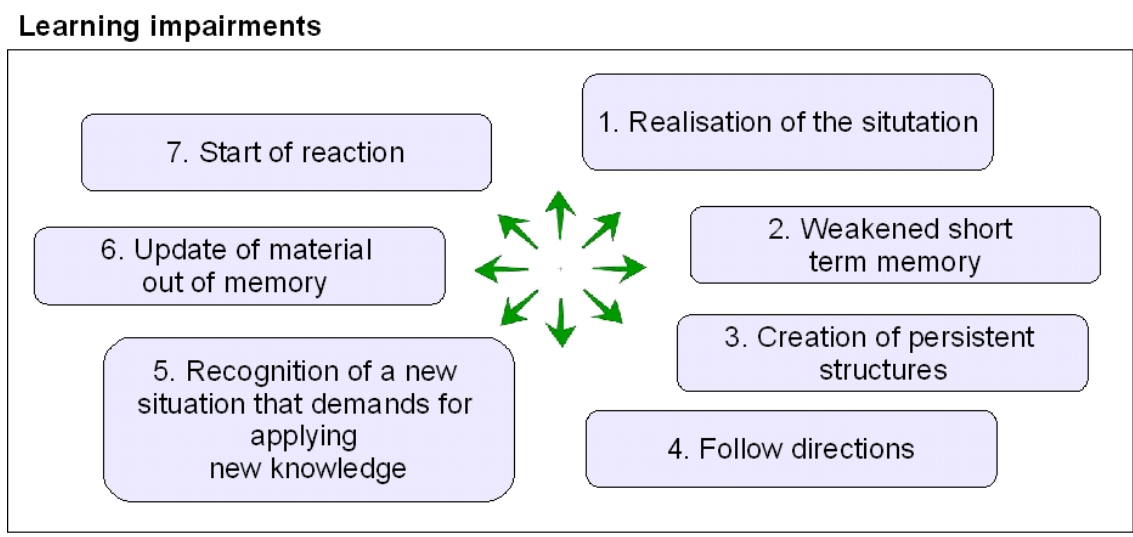


Figure 1: Learning impairments, adapted from Hörwick (2003, 9)

Whereas specific impairments in relation to learning for older persons need to be taken into account, there are also abilities and characteristics of personality that often develop during the aging process, as identified by Lachmayer (2006, 7): Experience of life, specific knowledge at the workplace, routine

and practice, sense of responsibility and work experience, sense of duty, accuracy, empathy, knowing personal boundaries, high spirit etc.

In the social field the abilities of older persons exceed others. Different research results point out that older persons have more professional engagement as younger persons, they know better about social interrelationships, have a better overview in different areas and have gained „expert knowledge“ on specific topics.

On the basis of these reflections it is quite clear that the success of learning and training is strongly influenced by the learning scenarios, the setting up of the learning materials and the available hard- and software (Lachmayr 2006, 9f). Research undertaken by the Austrian Labour Market Service (AMS) identifies more motivation to learn among older learners if age-related changes in learning processes are taken into account (“studie 2”, 1997, 119). These might include issues such as (cf. <http://www.g-p-s.at>):

- Contents need to be clearly structured;
- The relevance of the learning materials (e.g. for use at the workplace) should be evident;
- Modularisation of learning materials and appropriate units (in general ability to keep attention is reduced, i.e. more breaks...);
- Very often older people forgot how to learn effectively and fail to create memory hooks;
- Learning contents should take account of the working environment;
- Learning should build on work experience;
- Prior “Learning to learn” activities where necessary;
- High proportion of practical work;
- Accredited certification;

3. SUPPORTING EFFECTIVE LEARNING - THE ROLE OF THE EDUCATOR IN THE DESIGN PROCESS

Promoting ICT-supported effective learning is very much related to improvements in motivating learners and their active involvement in the pedagogical process. It also means to better take into account the individual learning process by considering prior knowledge and experiences of learners as well as the individual context of the learner, which is characterised by special and/or specific needs, communication and learning preferences, interests, availability of infrastructures, financial resources, cultural factors such as learning traditions, language etc.

From a pedagogical viewpoint learning principles applied in education of young persons are not different for adults and older persons. However, it is the design approach and the support of learning processes which vary in these different contexts. Special emphasis therefore has to be given to the roles of educators (course designer, teacher/trainer, facilitator etc.) who assess the audience's interest, current skills, and aims. This is important for structuring a learning atmosphere and selection of methods most satisfying and effective for the learners. Learning can and should be largely directed by the learners themselves. Therefore the meaning of mentoring and tutoring, a system for supporting learning and study guidance, gets special emphasis. Tutoring can mean support related to the learning process, study contents, tasks or technical problems. According to Daloz (1990, 223) effective mentorship is akin to “guiding the student on a journey at the end of which the student is a different and more accomplished person. In a formal learning situation, mentoring functions can be understood as variously providing support, challenge and vision.”. Tools for providing both tutoring and mentoring should therefore be adaptable for each purpose in Virtual Learning Environments.

Effective guidance and mentoring can be achieved through selective intervention. A skilled moderator is a mentor who can keep the fragile balance between advocacy and inquiry. The moderator must facilitate rather than dominate the discussion. When we focus on Vygotsky's (1978, 1986) idea of the learner's zone of proximal development, scaffolding, and dialogue, we have to turn our attention to fostering learning via virtual discussions, using strategies that include "voice", address learning and writing styles, and utilise Socratic dialogue. These ideas require us to tend to both the individual and group learning process. If we want to further online discourse, it is important not to forget that this learning process is complex, social and interactive. Research in social collaboration and negotiation in the vein of Slavin (1987) and others, calls attention to the design and support of what these learning environments require. Responsibilities for discussion become shared, feedback becomes integral, and all participants, including the moderator, are equal. Both instructor and learner are challenged to grow and develop in this environment. Instructors grow to become moderators and guides and students grow as learners.

Online collaboration as well as effective moderating must be designed if it is to have comparable impact to face-to-face instruction. Through conscious effort and application, "virtual" moderators can bring voice and tone into an otherwise sterile and distant environment, accompanying the learner as a reflective guide or maybe even much like a personal muse. Moderators are mediators and facilitators; generative guides and conceptual facilitators. The same issues that can be a weakness in a virtual learning environment can be exploited creatively to make learning come alive. Active learning is at the heart of the design of collaborative courses. Designing activities that ensure active participation is part of the moderation and discussion process. Facilitating the discussion is one aspect. Another aspect is making the discussants responsible for their own learning by sharing the responsibility and leading group discussion and work. All participants in a course can be provided the opportunity to experience being facilitators in discussion, team leaders, presenters of information, observers, and all are responsible to provide feedback and input into the learning process. However, for any of this to occur, a certain amount of control needs to be relinquished and turned over to the group. Moderators must stay in the shadows allowing the learner to shine.

Specific considerations for the moderators include how to scaffold this learning process in order to guide and enhance the quality of the discussion. Issues currently discussed include:

- How much moderation is called for
- Course organisation needs to define the roles and goals of moderation
- How to specifically scaffold the learning process
- How do we distribute the responsibility between moderators and learners.

Supporting learners to create shared knowledge is not always an easy task. It takes a blend of skill on the part of the moderator, clearly stated goals and objectives, appropriately designed tasks and questions, and the tasks, technical 'tools', and access through which these activities can be effectively engaged. Two issues come to light. First, are the issues related to supporting and maintaining quality discussion; and second, the issue of shared knowledge in a distributed or social learning environment. Related to the construction of knowledge and creating a shared knowledge base for the participants, Bellamy (1998) asks should this knowledge base be totally constructed or should there be a common knowledge base on which to build the collaborative process. Part of the argument here may be determined by the construction and parameters of the course, how much time the students have, and what the level and knowledge of the learners are coming in to the course. The experience has led us to observe that common ground needs to be established, and encouraging communication and interaction is critical to the discussion – but the biggest challenge lies in getting the learner to engage deeply and reflectively with the information. This observation is not uncommon. Again, Guzdial in his research has found related to online discussion forums, student participation and engagement with the information tends to be broad rather than deep (Guzdial, 1997).

4. DESIGN FOR ALL REFLECTING PEDAGOGICAL CONSIDERATIONS

Design for All is one of the key elements to open the world to all and to allow information and communication technologies to become universal tools for integration, also in relation to (ICT based) learning. Undoubtedly there is still a need to design hard- and software according to the needs of older persons as well, but, whereas there are many initiatives in that field, hardly any attention is given to the need for appropriate pedagogical approaches. Here again, as has already been experienced during the establishment of the first generation of eLearning tools and resources, technicians are the main players on the scene and too often their focus limits the results. A broader perception of Design for All in relation to (ICT based) learning as shown in the graphic below could help to overcome or avoid a too technical view and point out to the influence of (instructional) designers who create or reduce barriers in relation to learning as well

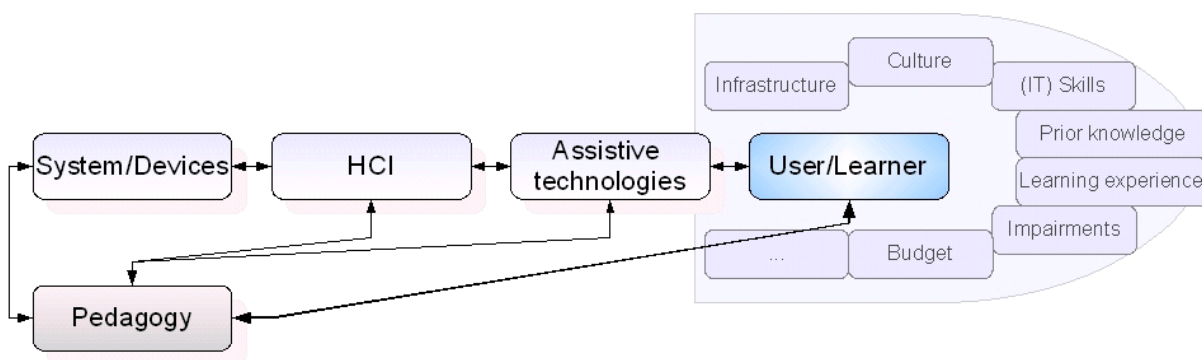


Figure 2: Relevance of Pedagogy in Design for All, based on contextual model from Miesenberger & Holzinger 2006

More consideration has to be given to pedagogical needs, especially in relation to ICT-based learning. The user / learner and its individual needs, built up by a multitude of influences (age, culture, sex, learning experience, prior knowledge, etc.), needs to be reflected in the design of hard- and software but where (ICT-based) learning is concerned, also in relation to a fitting pedagogical setting. Current research still does not allow putting forward distinct arguments how to design courses that pedagogically reflect different user needs. Some important aspects, e.g the focus on social activities, that has to be taken into account, have already been described above but more in depth research is needed in order to create more stimulating learning environments for older persons.

Taking into account the pedagogical considerations on the learning of older persons as outlined above, different approaches subsumed under the term Computer Supported Collaborative Learning (CSCL) are very promising. Traditionally these are based on ideas emerging out of constructivism, situated learning and collaborative reflection. Recently aspects of game based learning and informal learning are completing these approaches creating enriching learning environments, e.g. in museums or games. Videoconferences and games can probably combine the needs of older persons in relation to communication and social experience with the wish to actively engage in further learning and training.

5. CONCLUSIONS

On a very basic level the principles put forward by Knowles - although not the newest in research- can still guide course designers while creating learning environments for older persons (cf. <http://en.wikipedia.org/wiki/Andragogy>):

1. Adults need to be involved in the planning and evaluation of their instruction (Self-concept and Motivation to learn).
2. Experience (including mistakes) provides the basis for learning activities (Experience).
3. Adults are most interested in learning subjects that have immediate relevance to their job or personal life (Readiness to learn).
4. Adult learning is problem-centred rather than content-oriented (Orientation to learning).

Whereas the speed of technological innovations is increasing rapidly, adequate concepts are still needed for the educational use. Further research will need to contribute to a better integration of ICT in education and training supporting more effective learning of older persons. Investigation is needed on the potentials of pedagogical concepts and technologies of new educational approaches, which might better contribute to meet the needs of current and future education. This includes the exploration of scenarios and experimentations in order to verify effects of different settings for learning.

With respect to new pedagogical approaches collaborative learning remains a crucial issue to be further on explored in the future from different perspectives, taking into account organisational aspects on co-operation and collaboration as well as pedagogical, including staff development and pedagogical work in networked educational settings. Experiences are needed demonstrating sustainable results and concepts of good practice, analysed in a multi-cultural/European educational settings and based on different technological approaches.

As technologies have already done in other fields, ICT-based learning can assist enriching the lives of many people by opening up access to new ideas and insights, raising self consciousness, allow self-fulfilment, open up new chances in private and business life, facilitate interaction and communication with others and share common interests. However, the downside of this optimistic picture of the future of older adult education is that it will leave many behind. Those privileged by earlier college education who can afford user fees and tuition will discover a wealth of opportunities while those with lesser levels of prior formal education, who lack skills for accessing educational programs and/or cannot afford to pay for them, will have few resources to draw on if nothing is done to care for equal chances.

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