CHANGING LEARNING PROCESSES AND ROLES TOWARDS LIFE AND WORK: A DISABLED PERSPECTIVE

Ileana Hamburg,
Institut Arbeit und Technik, Wissenschaftszentrum NRW,
Munscheidstr. 14, Gelsenkirchen, Germany
hamburg@iatge.de

Christiane Lindecke,
Arbeitszeitberatung,
Virchowstr. 62, Gelsenkirchen, Germany
christiane.lindecke@gmx.net

Miona Lazea,
National School of Political Science and Public Administration,
Povernei Str. 6, Bucharest, Romania
miona@snspa.ro

Abstract: The research focus described in this paper is how to change learning processes to ones based on a "Learner-Centred Perspective" and so-called "self-controlled" learning with students who actively process the information they receive and construct the new knowledge through their own previous experiences. The education institutions and educators need to provide programs in which learners use approaches that are linked to everyday situations and learning environments gaining the skills to meet the challenges of their future. These environments should encourage reflection and knowledge construction through social interaction with other people in a "learning community". In this paper the experience of the authors in such learning processes gained within the German project ÖFTA- and the EU-Leonardo project EURO H are shortly presented.

Key words: self-controlled learning, e-learning, virtual communities, disabled people

1 INTRODUCTION

As a result of the transition from the industrial era to the knowledge era, new societal and educational expectations are defined e.g. learning outcomes to meet the changing roles and responsibilities of work and life. Some of the skills needed by workers of the new century are the ability to: think creatively, make decisions and solve problems, work in teams also with people of other cultures, select appropriate technology and apply it to specific tasks, direct own personal and professional growth through life long learning. Additionally, according to the League for Innovation in the Community College, some outcomes identified for 21st century learners include achievement of: communication skills, computation skills, information management skills, interpersonal skills and workplace skills, skills to manage the change, and last but not least learning to learn. These skills are different than those needed for the industrial age, because the knowledge age spans the boundaries of work, life and community. Youth and adults, people with and without disabilities should have the opportunities to learn the skills required to integrate with new forms of work and to participate actively in their families and communities. This is particularly important for people with disabilities because the labour market is often quite unreceptive for this social group. The percentage of handicapped people, who have a paid job or are integrated in a community, is much lower compared with that of the total population.

"New" learning processes and methods are highly important to promote the skills of the learners but also to improve the chances of people with disabilities. The new expectations concerning skills of the learners listed above indicate changes of learning processes. Besides the roles of learners also the roles of trainers change within different forms of learning. The use of a variety of information and communication (ICT) technologies is beginning to dominate both thinking and practice of our educational system (computer mediated education). Most relevant is the use of Internet technologies for distance education (e-learning) and the formation of a variety of education opportunities for learners of all ages, cultural backgrounds and experiences.

The shift to computer-mediated education poses enormous challenges to students, instructors and their institutions. Many trainers believe that the online classroom is no different from the traditional one. Hence, they believe the face to face approach will be also suitable when learners are separated from them and from each other by time and distance. However, when the connection with the students is through a screen, we must pay attention to many issues that we take for granted in the face-to-face classroom.

Some issues we have to take into consideration are derived from the relationships of the user to the machine, the relationships between the trainer (tutor or facilitator) and the learners (students) and the relationships among the learners themselves. These relationships define such things as: participation in the group or involvement with the subject matter, the emotional state and availability of the participants, personality that is developed through this interaction.

Online communities exist in virtual environments where teaching and learning activities in a particular domain are organized. These communities, in which the instructor and learners are geographically separated, use ICT to mediate their communication and social interaction. These interactions allow members of the community to develop emotional connections, social cohesion and sense of belonging to the community.

Social interactions among students in a community play a crucial part in positive processes but they can be problematic because the absence of face-to-face interaction with other members and social isolation in an online space can lead to a negative experience.

Our research focus described in this paper is how to change learning processes to ones based on a "Learner-Centred Perspective" and so-called "self-controlled" learning with students who actively process the information they receive and construct the new knowledge through their own previous experiences. The education institutions and educators need to provide programs in which learners use "learning-while-doing" approaches that are linked to everyday situations and learning environments in which learners successfully gain the skills to meet the challenges of their future. The learning environments should encourage reflection and knowledge construction through social interaction with other people in a "learning community".

We present in this paper our experience in such learning processes within the German project ÖFTA- and the EU-Leonardo project EURO H.

The main objectives of the EU-project "The Vocational Training by ODL of Young People with Locomotory Disadvantages" (EURO H) are to improve skills and competence of young people with impairments in some disciplines through computer mediated distance education in order to help them to be integrated in work and social life.

ÖFTA focuses on questions concerning the relationship between learners and trainers taking into consideration the special needs of people with disabilities and future measures to improve the situation of disabled students.

1) Which are the effects of computer mediated education on the relations between learners and trainers? What happens to the role of trainers? Which support is necessary to improve the changing roles?

2) Which is the influence of computer mediated education for the learners? How do media learning processes effect the relationships between learners?

3) What possibilities exist to develop learning concepts and methods which are suitable for people with disabilities?

2 CHANGING ROLES AND PERSPECTIVES

The tasks and the roles of the trainers and the trainees change through an increasing expansion of the "self-controlled" learning (SCL) in comparison with conventional, traditional learning (TL). In the next part of this paper we consider e-learning as a form of SCL.

2.1 Changing Roles of Trainers

It is clear that the role of SCL tutors (trainers) changes. Their task in such processes is to prepare sources of learning and to make them accessible for the students within a guided process. The trainer should not only "teach" but has the responsibility to make the learning easier for the trainees and to promote it. When a trainee can not solve an exercise, the trainer should not only make solutions accessible (like in TL) but also mobilize the learning potential of the trainees who search for a solution.

So we can say that the main difference between the role of the trainer in TL and SCL is a "confrontation" of a "teacher" on one hand and a "guide " of the learning process on the other hand. In TL the learning goals are determined by the trainer; in SCL this task is reached in cooperation of the trainer and the trainees.

There also are some differences at the preparation of the learning process: in TL the teachers prepare the learning material, choose the learning methods and plan the TL process; in a SLC process they collect the learning material and make it accessible to the learners. One task of the trainer in SCL is to help learners with their decision-making processes concerning their learning ways and learning content and to orientates better.

SCL trainers help learners to change their learning strategies and to check their learning progress.

The period of the training becomes longer, the requirements to the training knowledge change; a higher knowledge about the context, advising and computer competence is necessary.

2.2 Changing Roles of Learners

The roles of the trainees (learners) change also reflecting like a mirror image the changes of the trainers. The trainer leaves the position of an “know-it-all” person for one of a moderator and guide. The learners aren’t “passive” stakeholders of didactical prepared knowledge anymore but they develop a sense of self responsibility for the organisation of their own learning process. In a SCL the trainer activates their potential and the learners decide about learning goals and learning content.

Many authors show in their papers about SCL the many advantages of the changing roles for the learners in such learning processes. The participants of an on-line course can choose the themes which are interesting for them; they can determine the intensity and speed of their learning process. They can decide how long and in which order they learn.

Similar with the trainers, the learners need media competences in order to use e-learning for their learning. They particularly need to use the Internet in order to find suitable information which they have to structure and adapt to their qualification needs.

Media competence and assessment competence are necessary because the trainees should evaluate different existing learning offers in order to choose the suitable one.

The trainer should help the trainees to build a learning strategy which the learners have to follow with motivation and concentration.

Contact and information exchange with other colleagues are an aspect which is neglected in any e-learning processes.

2.3 e-learning: Chances and Risks for People with Disabilities

The presented changes in roles and requirements within e-learning show that there are some chances concerning more “equality of opportunities” and some risks concerning unequal opportunities. On the one hand, people who have difficulties to self control their learning process from different causes should remain outside SCL; on the other hand e-learning offers new possibilities for people who are disadvantaged in TL.

In the following we present some results of a German study financed by the Ministry of Social and Work (Goll et al. 2002). It is clear that new media can compensate some deficits due to an invalidity but there is not a clear answer if e-learning offers a better way to access educational measures. Main influence factors are the type of impairment, how the individuals overcome their disabilities and their willingness to cooperate with the trainer and colleagues in the learning process. The suitable medial preparation of the learning material and an "easy to use" learning environment have also a big influence.

The main advantage of e-learning for people with locomotive impairments is that they can learn in their usual environment (at home, at the work place, study centres, etc). The existing barriers and obstacles which hamper the daily study for handicapped are additional facilities specifically for them (for example ramps at study centres of the open universities or at work places) and structural alterations (special toilets, lifts).

3 EXAMPLES

One of the cooperation partners within the project ÖFTA (Figure 1) is the FernUniversität (open university) in Hagen. The tasks for the FernUniversität – namely to instruct handicapped would-be students by providing information and guidance on the range of study programmes available and offering decision-making aids suitable for each individual student – should , in future, be fulfilled in such a way that each individual is enabled to plan his or her studies in harmony with their own personality, personal situation in life and future professional requirements. With a view to optimising the prerequisites for participation in studies at the FernUniversität, the centre promoting studies for handicapped would be obliged, working in conjunction with the officer in charge of handicapped students issues, to incorporate the individual concerns, needs and interests of handicapped study applicants and students in the academic bodies as well as in the university administration and the student welfare service. A model of a mobile centre for the promotion of studies could provide handicapped students with better information and improved additional support. It is imperative that handicapped students participate in the elaboration of the concept for the implementation of the measures designed to help them.

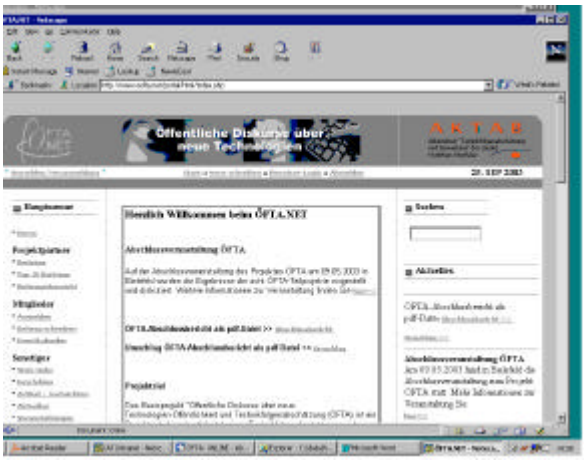

Figure 1: The Web-portal of the project ÖFTA

Within the European project EURO H (Figure 2) an integrated strategic e-learning approach with a learning environment has been developed taking into consideration:

- simplicity and clarity of the virtual class-room, i.e. division of areas according to function and easy and multiple navigation
- low technical requirements
- sufficient initial explanation and try-out of system, ideally in a class-room workshop,
- availability of trainers and peers,
- availability of technical support,
- understanding of trainer role as a guide and facilitator of group learning process,
- didactic design encouraging group-/project work,
- interlinking internal work with outside contacts.

A European centre EURO H of e-learning for disabled people is in the development. Training on-line and individual guiding by using some training modules developed within the project period will be carried out at this centre. In Romania, at the project coordinator SNSPA this centre will be supported by a physical location adapted for physically handicapped students. Similar locations are planned also at other project partners.

A virtual learning community consisting at the moment of some European experts in e-learning, trainers with experience in teaching disabled people as well as members of organisations of disabled people and last but not least of some disabled students is set up. During the project the community will be extended with other specialists

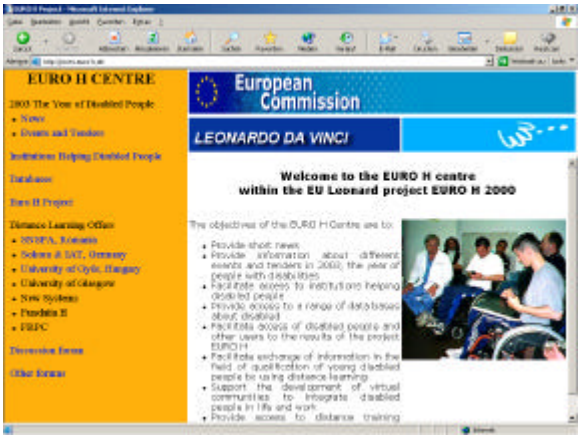

Figure 2: The Web-portal of the project EURO H

REFERENCES

Graf, P. / Motamedi, S. 2001: Formen der Weiterbildung, in: Seminare 2001.

Hamburg, I. / Cernian, O. / Thij, H. 2003: Blended learning and distributed learning environments. In: 5th International Conference on New Educational Environments: Lucerne, Switzerland – may 26-28, 2003; the know-how hub for blended learning. Berne: net4net.

Hamburg, I / Cernian, O. / Thij, H. 2003: Lernen und Kooperieren in verteilten Umgebungen: die Chance für die betriebliche Weiterbildung! In: Engert, Steffi / Hamburg, Ileana (Hrsg.): IT-basierte Lernformen für die betriebliche Weiterbildung. Gelsenkirchen: Inst. Arbeit und Technik.

Hamburg, I. / Lazea, M. / Marin, M. 2003: Open web-based learning environments and knowledge forums to support disabled people. In: Knowledge-based intelligent information and engineering systems: 7th International Conference, KES 2003, Oxford UK, September 3-5, 2003; proceedings, part 2. Berlin: Springer.

Hamburg, I. / Terstriep, J. / Engert, S. 2003: Accessibility and usability of learning environments for disabled: an example. In: Stephanidis, Constantine (ed.): Proceedings of HCI International 2003. Vol. 4: Universal access in HCI: inclusive design in the information society.

Hohenstein, A. / Poetsch, A. 2001: E-Learning – Aufbruch in eine neue Lernkultur?, in: Seminare 2001. Das Jahrbuch der Management-Weiterbildung. Bonn.

Hartmann, F. 2002: Vom e-learning zum e-Business der Personalentwicklung, in: Seminare 2002. Das Jahrbuch der Management-Weiterbildung. Bonn.

Goll, S. / Lilienthal, T. / Zapp, M.i / Gaensicke, H. / Clauss, H. 2002: Telearbeit für behinderte Menschen. Forschungsbericht im Auftrag des Bundesministeriums für Arbeit und Sozialordnung. Aktualisierte Fassung.