CVHI'2002 Granada EURO-ASSIST-VHI-2

Conference and Workshop on Assistive Technologies for Vision and Hearing Impairment

IMPROVING LEARNING FOR DISABLED BY USING SPECIAL PROGRAMS AND E-LIBRARIES

Ileana HAMBURG

Institut Arbeit und Technik, Wissenschaftszentrum NRW, Gelsenkirchen, Germany
e-mail: hamburg@iatge.de

Marina MUSCAN

National School of Political Studies and Public Administration, Bucharest 1, Romania
e-mail: marina.muscan@k.ro

Mihnea MARIN

University of Craiova, Colegiul Turnu Severin, Romania
e-mail: mihmarin@central.ucv.ro

Abstract: We present an example of a Romanian-German co-operation to improve learning for disabled people by using a special disabled student program and e-libraries.

Key words: disabled student program; e-books; e-libraries

1. INTRODUCTION

Education and continuing education of handicapped students have a high importance for them because it is not only a matter of "vocational survival", but also of "personal survival" and social independence.

In the ongoing debate by educationists and sociologists concerning the inequality produced by society today, deliberations continue to focus on the problem of how to cope with this problem within specific social groups, e.g. inequality between social classes and strata, the inequality between men and women, between persons with and without handicaps, between persons who have a workplace and those who have not.

One objective is to ensure a basic right education for handicapped persons which means also access to higher education institutions and improving their study conditions.

In this paper we present two proposals in order to achieve this objective: the development of a disabled students program at an educational institution (part 2 of the paper) and of flexible distance learning facilities based on the Internet (e-learning facilities like e-libraries) and using also psychological techniques.

We take these aspects into consideration within two Romanian-German projects (Leonardo-EURO H and a DAAD-co-operation) about improving the qualification of young people with vision and/or hearing impairments (part 3 and 4).

2. A DISABLED STUDENTS PROGRAM

The objective of a disabled student program at an educational institution is to ensure for students with disabilities equal access to educational opportunities thus being able to participate freely and actively in all facets of the institution life.

The program which is in development at the University of Craiova, Colegiul Turnu Severin, Romania, within a DAAD co-operation of this institution with the Institut Arbeit und Technik, Gelsenkirchen, Germany, serves students with different disabilities including mobility, visual or hearing impairments as well as learning disabilities.

The main task of the College Turnu Severin is to carry out both high education and vocational training activities for people of the region Mehedinti taking into consideration regional needs. In this region many manufacturing companies were closed. Economists as well as administrative and financial staff with good computer skills are required in the whole region. This college is the only one in the region that began to take into consideration needs of disabled people and, together with the Institut Arbeit und Technik, initiated the disabled student program from Turnu Severin (DSPTS). The services offered by the DSPTS are modifications of a course program or of instructional methods (e.g. Brailled textbooks, extended time for exams), note takers or laboratory assistants, keyboard or speech commands provided for those people being unable to use a mouse. It is planned for users who cannot move freely their hands and arms to use speech recognition software.

The students who use DSPTS services have to be checked by professionals if they suffer from the consequences of a physical, mental or psychological handicap which is not typical of the respective age and need individualised services in order not to be disadvantaged.

The evaluation process is done by a team of 1-2 experts and 1 member of the DSPTS and includes an interview with the student and an investigation of medical documents of him. The student has a right to privacy in his disabilities.

At the moment, the DAAD-project team develops a guide with four chapters (mobility, visual, hearning and learning impairments) of suggestions for the teachers of courses visited also by disabled students.

3. FLEXIBLE DISTANCE LEARNING FACILITIES

By using telecommunication services particularly those based on the Internet and on the Web ones, different flexible distance learning facilities can be developed like the following:

- Collaborative facilities. They include the interaction among the participants themselves and not only with the tutor, and the collaboration in learning that results from this interaction. In other words, the formation of an on-line "distance learning"

community. It is important that the tutor remains actively engaged in the learning process in order to guide participants who stray, to go back to the learning goals. The collaboration involved in learning in communities supports the process of knowledge acquisition. The choice of exercises for the learners can facilitate this process. The collaborative learning should be supported by Web-based learning environments providing not only learning resources but also communication facilities. These can be asynchronous in discussion forums or by e-mail or synchronous (real-time) in chat rooms.

- Self-paced learning packages available on CD-ROMS, floppy disks or on the Web. The students can work course materials and exercises at their own pace, starting and ending at any time. Most of such packages are text-based, but now multimedia facilities are used increasingly. Self-paced learning packages enable learning-on-demand or just-in-time training in order to meet immediate needs in business and industry.
- Audio, video or slide (e.g. PowerPoint) distribution models which can be transmitted via Internet (live presentations) or not.
- Simulations and virtual realities to create life like environments, e.g. in business or medical area.

In the following we present an example of a Romanian-German co-operation to improve the qualification of young persons with disabilities at the National School of Political Studies and Public Administration, Bucharest, Romania, by using some e-learning facilities in order to help them to find work places and consideration in the society.

Our project takes into account two categories of subjects:

1. *Blind people or with vision impairments*: who have limited visual perception or who don't have it at all but who possess a very good hearing.
2. *Deaf people or with hearing impairments*: who have hearing problems but who possess a good vision.

Using the institutional organisation of a *"virtual (on-line or tele) learning community or learning network" (Ionescu/Hamburg/Balanica 2000, Ionescu/Hamburg/Ionescu/Muscan 2001)* in order to have an official educational status we can offer to our students lectures on magnetic disks or on CD for the ones who have a PC at home, and printed lectures for the ones who don't have a PC. For people with hearing impediments the lectures will be designed using a very good graphic (on the magnetic disks, CDs and printed lectures), for the people with vision problems the lectures will be projected so that these people could benefit from their sound interface. The lectures for blind people who don't have a PC at home will be written in Braille alphabet.

But beside lectures it is planned to offer them e-books which could help them to develop their knowledge horizon.

4. E-BOOKS

The term e-book is used for published materials, such as reference books, scholarly monographs, and consumer books that have been converted into digital format for electronic distribution. E-books are much more powerful than traditional books as they are available twenty-four hours a day, seven days a week, from any location in the world. But there are also other elements that are important regarding the use of e-books like the following:

- The content - although there are many aggressive vendors and publisher initiatives, the corpus of an academic level of e-books available is still small and not yet representative in many disciplines. At this level subjects like computer science and business are growing rapidly. The integration of unconventional media with text is important for the future development of e-books in order to replicate the print version of a book. E-book content should match any print version and also include visualisations, interactive content, etc. The content needs to be separated from access and manipulation features and needs to be transferable into a variety of software and hardware readers.
- Software and hardware standards and protocols have to be used e.g. which ensure interoperability with both PC and portable reading devices.
- Right management systems that enforce control over intellectual property and which are still being developed,
- Access and accessibility (very important qualities for disabled) that means issues including user awareness and the ability to accommodate simultaneous users and users with special needs. For this last group e.g. unlabelled graphics, frames with complex tables, applets and sounds should be avoided. Guidelines produced by the Web Accessibility Initiative (WAI) (www.w3.org/WAI/) as a working group of the World Wide Web Consortium (W3C) can also help designers of e-books for disabled.

Specific categories of e-books should be a special opportunity for disabled people to build their psychological profile in order to be able to interact with the outside world.

In the first phase of the project, we can offer disabled students who are registered for e-learning courses e-books on magnetic disks or on CD for the ones who have a PC at home. For the people with hearing impediments the e-books will be designed using a very good graphic (on the magnetic disks or CDs) and for the people with vision problems the e-books will be designed in order to become "talking-books" so that these people could benefit from their sound interface. Later these e-books could be written in Braille alphabet for blind people who do not have a PC at home and they also could be available on tapes for deaf people who don't have a PC.

We want to offer them two main categories of short e-books:
a) e-books that are a transposition of well-known books written by authors from the entire world in time in order to help them to have access to these universal values.
b) Psychological e-books designed especially for blind and deaf people in order to help them to develop their social knowledge.

The first category of e-book help disabled people to increase their level of education and to become a competitive work force. In our project the topics of e-books that have to be developed are about computer and Internet basics, history of the Internet and some applications.

The second category of e-books are based on a psycho-social education knowledge and can help them to improve behaviour, to handle emotions, to acquire skills, to change attitudes, etc.

It is known that the origin of the fundamental thinking categories lies in the structure of the social relations. A person begins forming his fundamental thinking categories by

interacting with other children. This way he has access to a specific set of knowledge, which helps him to simplify his mental world allowing him to establish a set of behaviour rules, which will help him to interact with others. This set of rules become social representations for a person or scripts which allow this person to behave properly in the society. A blind or a deaf person has a limited possibility to interact with other people. So these persons have affiliation needs. A young person can satisfy his need of affiliation to a certain group through objects which have psychological nature (Lorenz, 2000), because it consists of new comportment rules established by the group that one person decides to join. But many times people with disabilities are not capable to follow a certain rule due to their handicap and they are rejected by the social group because they can't respect the social rules of the group. They will represent "*the stranger*" that Georg Simmel was talking about. Someone who is not entirely integrated in the society and will never be and even they will start to feel as if they don't belong to the society and the affiliation need will remain unsatisfied and the person will become isolated and marginalized, unable to live in the society. His/her social and spiritual development will stop.

Integration means to bring ourselves to become part of the prevalent society and is not the same as to be absorbed by another group (assimilation); this is a very difficult objective for disabled people and so it should be supported in many and different ways. There are many forms of integration such as economic integration, political integration, religious integration or social integration. In this paper we refer to a social integration, that means not only adaptation to changes but also try to influence changes.

Referring to social behaviour which is important for a social integration and matters a lot in life has been shown to be eminently learnable, but only under certain condition including a great willingness. Many handicapped young people want to be helped in this direction and the rejection of external influences is less then in case of young people without impairments.

Over the last two decades, social behaviour training has begun to find its way into schools, but teachers have not themselves been trained on these new areas and are already overwhelmed with too many subjects to teach. Under the heading "soft skills", social behaviour training is expensive (time and costs), of uneven quality, can not be individualised, requires synchronising learner's schedules, and forces public exposure in areas that traditionally have been considered a private domain.

New technologies, particularly the Internet show great potential for solving some of these problems. But to be effective for social learning, linear, text-based e-learning is not enough. Behaviour training, especially training in sensitive areas of social behaviour, involves interactive, emotionally engaging skill building.

In our project it is intended to develop the psychological e-books as an interactive psychological guide for disabled people which also encourage them to use their knowledge, to impart it with others and to create new ones.

The psychological e-books will contain examples of social interaction situations and processes and they will also provide psychological problems, which could be solved by disabled persons. This way these persons will possess at least the theoretical social background, which could help them to interact with others.

In our project, a team of disabled people, experts from different fields and trainers develop now a psychological book.

The e-books will be put into special archives (e-libraries) and can be used by all students which are registered for the e-libraries or for e-learning-courses. We motivate the students with impairments to use the e-books within collaborative processes with other students (which and without impediments) by building virtual learning communities. We began to initiate such communities in the two presented projects.

For the next year it is planned to use BrailleNote (developed by Microsoft and Pulse Data International) to translate the developed e-books into Braille.

5. Conclusion

The next steps within the DAAD co-operation are to extend the services of the DSPTS and to develop such program for the whole University of Craiova, Romania.

Referring to e-learning facilities like collaborative learning and e-books the project team would like to develop e-books not only for disabled high education students but also for young people with disabilities in sheltered workshops and rehabilitation clinics in Romania and Germany.

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