

## CREATING E-ENVIRONMENT TO PROVIDE INDEPENDENT LIFE FOR DISABLED PEOPLE - E STUDIO –

### STVARANJE E-OKRUŽENJA ZA OSIGURAVANJE NEOVISNOG ŽIVOTA OSOBA S INVALIDITETOM –E STUDIO –

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**Abstract:** Nowadays, EU countries face numerous key challenges concerning disabled people: low employment rates, high dependency on benefits, increasingly high public spending on disability benefits and increased poverty risk. As surveys in EU show that 16% of the population is affected by a disability, the 2010 e-Inclusion policy aims to remove barriers to ICT use and to promote it with a view to preventing exclusion, improving economic productivity and employment opportunities. This paper is focused on describing the two key issues followed in the e-STUDIO project: to draw a framework for e-Inclusion of disabled people through e-Learning and to promote a new understanding and consensus on disabled people, their rights and their potential.

**Key words:** disabled people, e-Inclusion, e-Learning, lifelong learning.

**Sažetak:** Danas se zemlje Europske unije suočavaju s brojnim izazovima vezanim uz osobe s invaliditetom: niska stopa zaposlenosti, visoka ovisnost o naknadama, stalno povećanje javne potrošnje za pomoć osobama s invaliditetom i povećana stopa rizika od siromaštva. Istraživanja pokazuju da je 16% stanovništva Europske unije u skupini osoba s invaliditetom. Politika e-uključivanja iz 2010. godine nastoji ukloniti prepreke u korištenju ICT tehnologija u svrhu poboljšanja ekonomske produktivnosti i povećanja mogućnosti zapošljavanja. Ovaj rad opisuje dva ključna elementa e-STUDIO projekta: sastavljanje okvira za e-uključivanje osoba s invaliditetom kroz e-obrazovanje i promoviranje razumijevanja osoba s invaliditetom, njihovih prava i potencijala.

**Ključne riječi:** osobe s invaliditetom, e-uključivanje, e-učenje, cjeloživotno učenje.



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## **1. Introduction**

Distance learning is becoming ever more important than the traditional/classical one; moreover, the number of institutions, where this system is successfully applied, is constantly growing [1]. Thousands of e-learning projects have been in progress, while they differ in their outcomes and technology exploitation. Moreover, there is a lack of a standardised way of planning, comparing and evaluating e-learning projects, their outcomes, and their effectiveness, as is stated and discussed in the literature. [2]

Disabled people have very specific needs and concerns; therefore they are very special users of e-learning. Their needs and inclusiveness in the society depends on the type of disability. There are many types of disabilities such as physical (difficulties with movement or self-care), sensory (blind and or partially sighted, deaf and hard-of-hearing), cognitive (learning problems, communication problems), psychiatric (behavior and personality disorders), and health-related (chronically diseased) [3].

e-Learning for disabled people is delivered via computer using multi-media materials – spoken or written text, sounds, pictures, animation or video [4]. Students can receive audio and video streaming from lectures, and it does not matter where it takes place. It is also possible to communicate with each other and to take an active part in discussions during a lecture. Students can feel as if they are actually present in the classroom [5].

Creating an e-environment requires programs (software) targeted to teach useful skills to the disabled, while structuring the program to promote generalization of the skills to the natural environment. Proficiency in community skills provides a disabled person with more opportunity to interact independently in his/her environment [6].

## **2. E-environment features**

In 2006, EESC suggested, based on the terms already in use in EU as e-Europe, e-learning, e-skills, the term e-LL (e-lifelong learning) highlighting the role of this form of learning and the need to develop and extend it within the eEurope action plan and i2010 initiative. Subsequently, a new EU initiative undertaken in connection with the i2010 Commission communication is the e-Inclusion (MC, Riga, 2006). The term e-Inclusion refers to both the inclusion of ICT and its use as tool of achieving inclusion. The e-Inclusion policy aims to remove barriers to ICT use and to promote it with a view to preventing exclusion, improving economic productivity and employment opportunities. Therefore, a dedicated project must focus on two key issues: i2010 Initiative, considering e-Inclusion as means to prevent the risks of digital exclusion, namely through e-Learning and the promoting a new understanding and consensus on disabled people, their rights and their potential. Based on these data, the authors who are part of the project team being involved in project planning, development and further on, implementation, focused on two main objectives: a detailed presentation of the project's components and, on the other side, the impact each of them, separately, and the project as a whole have on disabled people life on both educational as well as on social and economic levels.

e-STUDIO project brings together disabled people with families, tutors, teachers, disabled representatives and volunteers, researchers and entrepreneurs and takes the opportunities to provide them independent life, through e-learning, e-communication, and e-inclusion. E-environment hence created must include an e-learning center with interactive training modules for students, teachers' training, therapists, parents; a guiding and counseling e-center aiming to increase the accessibility to education, legislation, good practices in skills and abilities development, employment services and opportunities, mentoring; a collaborative platform providing support for on-line interactive connection and exchange of information. Therefore, promoting a disability culture, e-STUDIO will intercross the features of an active citizenship in citizens' development achieving e-Inclusion through e-Learning.

e-STUDIO aims to increase the inclusion rates of disabled people, satisfying their need to build an independent life through social rehabilitation and access to education, training, labor market creating additional added value. The objectives of e-STUDIO must be:

- Supporting the development of innovative ICT-based content, services and teaching/learning methods for lifelong learning,
- Building the suitable person-centred methodology,
- Supporting and facilitating access of disabled people to education through continuous acquisition skills,
- Developing the skills and competencies of teachers, trainers and tutors (including teaching/learning material and assessment means) supporting innovation through improving quality,
- Facilitating access of disabled people to labor market as employees through disability culture improvement among the employers,
- Facilitating access of disabled people to labor market as entrepreneurs through entrepreneurial abilities and skills development.

### **3. E-environment components**

E-learning center aims to facilitate disabled people knowledge acquisition, restore their social identity and integrate them in communities through access to learning, training, working and inclusion based on numerous connections among learners and experts. It enables integration with other professional video conference systems developed and implemented for disabled people (e-learning solutions from stakeholders).

E-learning center comprise:

- e-platform for on-line teaching/learning and assessment,
- interactive training modules for students,
- modules for teachers' training (covering different disabilities, their characteristics as well as specific pedagogies),

- modules addressed to parents, tutors and PMA (aiming to improve and enhance their abilities in supporting children/youth in using e-learning environment).

Therefore, e-STUDIO provides easy to use ways of teaching/learning saving time and financial resources. It must enable further development of target group knowledge through access to information, training, specialized courses. Technical advantages of such IT solution are intuitive graphical interface, unlimited access from any location, installing and use does not require advanced knowledge and administrative privileges, allowing real time simultaneously a number of locations based video-conference. Media content can be recorded and watched on PC by passive participants, centralized administration is done through on-line access, in advance scheduled trainings, participants status being watched over in real-time.

Collaborative platform facilitating on-line connections among stakeholders, improving their knowledge and information for a better co-ordination.

The aim of guiding and counseling e-center is to assist disabled people in entering labor market through educated access to appropriate services, information and legislation. This center will comprise a “mentoring” system developed and implemented that will connect disabled people who plan to study or are studying (the mentees) to non-disabled people (studying or working for relevant employers) (the mentors). On the other hand, GCC will create basis of knowledge and information for parents’ associations, disabled people associations, NGOs, local, regional, national and European public institutions and stakeholders, SME associations, promoting and awareness-raising the issues of disabilities.

#### **4. E-environment impact**

On education level, the e-environment developed will be attractive for disabled people interested in improving their capacities and capabilities, for families interested in new means of supporting and care-taking, for teachers interested in improving pedagogical methods, for education institutions aware of the capacities brought by disabled people. Education area will be focused on the increase of disabled people inclusion rate through decreasing number of those who abandon studies, improving skills, improving accessibility to various means of living and knowledge (education institutions), improving pedagogical methods based on thorough understanding of disability culture, increasing awareness in education institutions on the capacities brought by disabled people.

On social and economic level, e-environment will impact the society and social responsible citizens from partnership countries and Europe and will enlarge the long-term target group adding the entrepreneurs who got/want to get involved in this full of potential area, organizations, institutions, NGO’s involved to ensure equal levels of treatment and protection for everyone living and working in Europe. Their active participation will stimulate the awareness and increase the understanding in order to

improve inclusion and cohesion in Europe. Social and economic area will be focused on the increase of disabled people employment rate through identification, development and implementation of flexicurity pathways including suitable contractual arrangements, part-time and temporary jobs, and active labour market policies.

A snow-ball effect will be produced once the e-environment will be implemented. Target group will be informed on the outcomes, being stimulated to get skills allowing disabled people to access the labor market and improve their everyday life, families to learn about new means of supporting and care-taking, teachers to improve pedagogical methods, education institutions and entrepreneurs to become more aware of the capacities brought by disabled people, governmental officials and NGO's to ensure equal levels of treatment and protection.

## 5. Conclusion

As main part of short and long term target groups, disabled people will get new competencies and abilities supporting and allowing them to easily step into the national and European labour markets, in this way being an active part in GDP creation correlated to decrease of costs (budget expenditures) allocated to their support. As for the other members of target group (families, teachers, trainers, tutors), added value will be materialized in clear understanding of disability culture, needs and requirements disabled people express, and will lead to a common base of knowledge, standards, evaluation systems and language issues.

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