

The e-facilitators in School

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Abstract—In this paper is described the social need for the e-facilitator in school, his functional requirements, his curricula, his roles in school and society, the knowledge and skills he must possess, the difference from the e-facilitator in Public Internet Centers and his positioning in the process of e-Inclusion. combined with its, Discussed is it's insertion into the European and national ECVET and qualification frameworks, the establishment of a model how to extend, customize, localize and provide training materials empowering fast track for improving the quality of training for e-facilitators throughout Europe

Keywords— *e-facilitator ·e-Inclusion ·school ·teacher ·style ·telecenters ·civic centers ·stakeholder's associations ·quality of training*

I. INTRODUCTION

Over the past few years, we have witnessed a continuous trend of e-inclusion policies related to the use of ICT as a tool for personal development, formation of active citizenship, creation of networking culture, and improving the chances for better opportunities and employability. These policies have been developed at European, national, and regional levels, but there are significant deficiencies that lead to a widening gap between those who have access, and more importantly – the ability to use ICT, and those who are excluded from the "digital world" – by their lack of ICT tools, skills, or motivation. This omission turns out to be crucial, when it comes to social cohesion and economic development at both regional and European levels, and as such, this lack of digital participation might affect the opportunities, presented to certain individuals within their communities, and the development of local labor markets. Various communities (such as regional or local, immigrant, etc.), or target groups (older people, the disabled, etc.), who might lose their contacts due to the progressive development of digital society, stand the risk of being excluded from the world of employment, education, and participation in public life.

In answer of this a great number of NGOs have activated several networks of Public Internet Centers (PICs) throughout Europe in an attempt to reduce the Digital Di-vide by

promoting e-Skills, effort recognized in the EU Ministerial e-Inclusion Confer-ence (Vienna, 2008). Their staff/volunteer e-Inclusion Facilitators (social/cultural animators, ICT trainers, guidance experts, on-demand assistants) are the promoters of disadvantaged users' engagement and their link to local context, so the investment in their "training is essentially the key factor for successful implementation" [8].

II. THE E-FACILITATOR - KEY PLAYER FOR E-INCLUSION

The term "e-inclusion" analytically comprises of two distinct perspectives: in the first place, e-inclusion can be understood as the challenge to guide people through the digital world, and the promotion of digital literacy as one key to "innovation and the sustainability of the socio-economic ecosystem of our society", on the other hand, e-inclusion can be understood as an opportunity for enhancing key competencies, social participation, and the quality of life.

Key factor in e-inclusion is e-Skills, where communication is based on the understanding of a skills pyramid with a basic level (literacy and basic skills), an occupational level and a talents level. The e-facilitators are an answer to the raising demand of "bridging the digital gap", as they are intended to be promoters of digital competences addressing specific needs of very specific regional target groups especially in disadvantaged target groups and for people with special needs. Necessity from e-facilitators in schools.

A. Maintaining the Integrity of the Specifications

The rapid growth and enrichment of approaches, tools and facilities in IT areas re-quire continuous update of the available knowledge and skills and acquisition of new knowledge and skills for broad range of diverse groups of users with general as well as specific needs for ICT services. These requirements are hard to be met by the regular educational institutions because of many reasons: very fast changes in the necessary knowledge and skills, insufficient computer and communication infrastructure of the educational institutions, the natural conservativeness of the general education. School education,

on a global scale, has also been presented with a number of challenges – brought about by the vast technological forces shaping contemporary life. Computers and the internet are having increasingly complex influence on the formation of present-day youth; they affect relationships between people, their status and professional realization in society. Frequent (daily use) of the internet, has increased by 3 per cent between 2011 and 2012 in the EU, from 56% up to 59%, which only supports the view that larger segments of the population are getting on-line, and their involvement with net becomes more and more their daily routine.

A small survey, made in Bulgarian province schools, based on interview protocol consisting of fifteen open-ended questions, answered by several hundred respondents. The ratio of teachers to students was 72% to 28%.

The numerical scoring analysis indicated two points of view – teachers and students. Teachers believe students learn by doing, that teaching is providing information and facilitating student initiatives in learning. They stated numerous times that learners should be good listeners and self-motivated. The teachers in the study were more open to individual student learning styles and multiple learning styles. The teachers stated their top priority was to help their students to acquire problem-solving skills. The teachers' view on curriculum has changed from being totally dependent on the district curriculum and guidelines, or following other teachers. All teachers now report that they are open to students' and community in-put into their curriculum.

Students believe they learn best by hands-on activities and by listening and reading. Most of them solve their knowledge problems through Internet consultations using e-mails, chat, skype, social networks, forums etc.. They enrich their access to content using search machines and digital libraries with their embedded tools.

Here results for two interesting questions are presented:
Question: How long does it take for you to solve any IT problems?

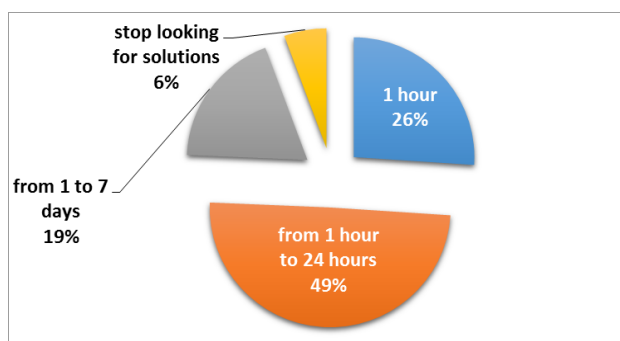


Fig. 1 How long does it take for you to solve any IT problems?

From the diagram above, it can be seen that teachers who are able to resolve an issue, and those for whom this is a very time-consuming task, or they have given it up altogether, are almost equally distributed, and comprise of almost half of all those surveyed.

Question: Do you think the presence of an expert in your school would help you resolve any issues, related to the use of IT ?

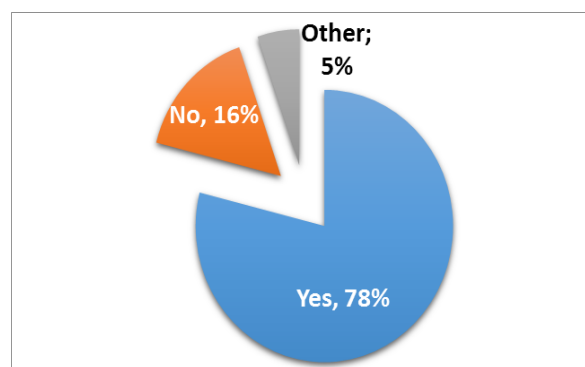


Fig. 2 Do you think the presence of an expert in your school would help you resolve any issues, related to the use of IT ?

Out of the remaining half, for whom it takes about a day to resolve any IT-related problems, 66 % have sought help from friends or experts, and 34 % have used the internet to find solutions.

The survey shows that it's the right time to embed a multifunctional specialist with IT orientation, acting as creator, advisor, community builder, moderator and coach– the e-facilitator in school, responsible for adjusting the education to the social and economic reforms in Bulgaria.

This situation clears for whom is needed the e-facilitator in school and sets the vision for their target groups in school – (1) Students on their classes in secondary and high education, suffering difficulties in their upcoming entry on the labor market due to lack of appropriate knowledge and skills for this market; (2) School teachers in need of professional consultation for the application of contemporary learning methods and technologies in education.

III. PROFESSIONAL PROFILE AND IMPACT OF THE E-FACILITATOR IN SCHOOL.

As presumed the e-facilitator in schools is creator, advisor, moderator and coach of the Clubhouse for Creation in the Digital School World.

We presume the following general professional profile of the e-facilitator in school.

Who is the e-facilitator in school? Is he teacher plus? And if yes – where or what is the plus. Do we need to start vocational training in schools as a surplus to the traditional education? And if yes, where is the difference.

We find it in the ICT-empowered implementation of learning paradigms for all learners' groups, life stages and contexts, with a focus on pedagogical and instructional aspects rather than on infrastructure and technology itself.; In drawing a change management framework, based on embedding of ICT

in learning process that gives power to further changes across the technological, organizational, teaching and learning environments of classrooms, workplaces, and informal learning settings.

We presume that there are three possible scenarios (approaches) for creating the e-facilitator in school:

- Using leading IT teachers
- Extending the IT knowledge and skills of nature science teachers
- Extending the knowledge and skills of IT specialist on the pedagogical and psychological side.

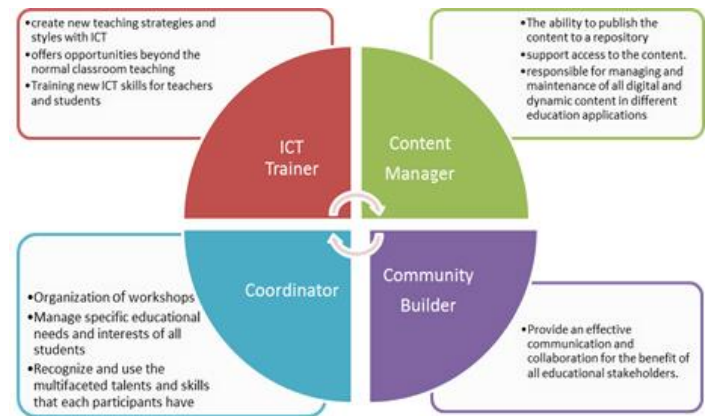
Thus the impact of the e-facilitator in school consists in pre-selection, profiling and adequate professional orientation of the trainees, ensuring their fast track for better employability on the IT labor market; in development of dynamically growing scheme for complimentary vocational training in ICT in school and also in the planning of training content – necessary knowledge and skills for the ICT, orienting the trainees to the IT job potential, enabling tele-working and mobility; in the formation of set of vocational training sites on (regional) school level; in successive covering of training of trainers, training of trainees ensuring different training levels and forms, flexibility of the courseware and application of advanced educational approaches. By means of innovative training approach the following objectives will be realized: (1) to improve the competitiveness and the entrepreneurship of the trainees on the IT labor market (2) to define the scope of the necessary IT knowledge and skills of the students in their dynamics; (3) to improve the ICT skills and competencies of the trainees in order to broaden their access to the IT labor market; (4) to facilitate the implementation of innovative paradigms in ICT education in schools (e.g. Science based learning).

This leads to the necessity for the e-facilitating process in schools to develop facilities for pre-selection, profiling and adequate professional orientation of the trainees, ensuring their fast track for better employability on the IT labor market.

IV. ROLES IN WHICH ENTERS THE E- FACILITATORS IN SCHOOL.

The e-facilitator is the key player in guiding the process of e-inclusion of the target groups, making transfer from the formal ICT education to vocational training, realizing transfer from abstract ICT knowledge to professional skills of the learners. Facilitating and introducing innovative methods and learning paradigms – e.g. virtual labs, simulators, using science methods in learning, technology enhanced learning etc.

In supporting all these learning activities and tasks in the school ecosystem the e-facilitator in schools enters in various roles.



A. *Learner* - transfers information into knowledge. S/he uses the courseware from the distributed repository of the set of vocational training sites on (regional) school level, acting in the following roles:

- learning scripts navigator
- repository resources explorer
- self-evaluator of personal assignments
- participant in collaborative forms of learning (e.g. tele-discussions, peer re-views etc.)

B. *Trainer/advisor* – assists/advises/guides the learners (teachers and students) in the educational process, acting in the following roles:

- producer of diagnosis
- advisor
- content planner
- content creator
- education planner
- assignment evaluator
- coach

C. *Manager* - manages the actors and events in the educational process, acting in the following roles:

- planner
- community builder
- decision maker
- supervisor and controller
- team or group organizer
- director of learning assignment

D. *Mediator* (“information broker”) – facilitates the navigation of the other participants in the process, acting in the following roles:

- information communicator

- user profiles production and maintenance
- helper in environment use
- intelligent help in document retrieval
- security adviser.

These roles and the corresponding actions will be performed in the following structures ("virtual spaces") of the vocational training sites in school:

- An information space ensuring learner's access to the repository ("virtual library"), for use of courses and courseware..
- Learner's rooms with the requisite tools to participate to learning system: to work with courseware and to complete assignments.
- A communication and collaboration space with tools enabling actors to communicate, carry out group activities and participate in remote seminars and teleconferencing.
- An assistance space where actors may get support and advice or have their environment customized, by calling upon either online support personnel or computer-based help resources.
- School campus square - information support for scientific events, social contacts, campus shop.

Virtual training center

A component of the virtual structure to organize qualification courses and skill acquisition outside the curricula structures of the campus (short term courses, focus on hands-on experience, courses generated on demand). The center is considered to be used by the campus students as well as for vocational training and non-formal learners.

Virtual electronic publishing enterprise with author studios, producing all kind of learning materials.

Virtual library (dataware house for reusable multimedia learning materials), storing various types of documents or data required by the actors to fulfil their function. It contains multimedia materials (text, graphic, audio and video objects) selected thematically for the needs of the courses distributed and courseware on different levels of complexity

Public relations department with personal learner's guides – information mediators for the users (admission advisors, carrier advisors, employing etc.).

University management unit, organizing the "clerical activities" (admission, documentation)

V. THE DIFFERENCE BETWEEN E-FACILITATORS IN PICS AND THE E-FACILITATORS IN SCHOOL.

Thaw having similar functions, there are several principal differences between the e-facilitators in PICs and the e-facilitators in school.

TABLE I. PRINCIPAL DIFFERENCES BETWEEN E-FACILITATOR IN PICS AND E-FACILITATOR IN SCHOOL

Principal difference	e-facilitators in PICs	e-facilitators in school
Target groups	Various communities or target groups, who might lose their contacts due to the progressive development of digital society, stand the risk of being excluded from the world of employment, education, and participation in public life.	Students on their classes in secondary and high education, suffering difficulties in their upcoming entry on the labor market. School teachers in need of professional consultation in application of contemporary technology and methods in education.
Who is the e-facilitator	Employees of PICs with IT, management and and psychological skills	leading IT teachers; nature science teachers with extended IT knowledge and skills; IT specialist with extended pedagogical and psychological knowledge and skills
Kind of the activity	Continuous education VET	Applying VET as complimentary to traditional education
Curricula	1 Building a network culture 2 Resources for facilitation tasks in the telecentre 3 Telecentre sustainability 4 Promoting ICT for the elderly at the telecentre 5 Promoting ICT for immigrants in the telecentre 6 Getting familiar with office tools (Open/MS) for developing digital literacy workshops 7 Digital photo workshop in the telecentre 8 Facilitating job seeking in the telecentre 9 Planning a digital literacy workshop 10 Online Procedures - facilitating access to e-services.	In progress of building See chapter 7 of the paper Should take into account the three tracks of becoming e-facilitator in school
Roles	Coordinator, community builder, content manager,	Enriched

	computer consultant	See chapter 4 of the paper
Results	Social inclusion in information society of target groups	Professional orientation, Enhancement of teacher professionalism Preparing students for labor market Establishment of vocational training sites on (regional) school level
Use of training learning environment and content	Vocational training site of PICs	Established vocational training sites in school using centralized LMS with authoring studios for creating digital content

VI. DEVELOPING THE CURRICULA OF THE SCHOOLTEACHER – E-FACILITATOR.

The development of the curriculum for e-facilitators is in progress. The difficulty comes from the three tracks of becoming e-facilitators in schools

Their curricula should be targeted to:

Education on information and communication technologies concerning the facilities and the training of teachers

Tools for pre-selection, profiling and adequate professional orientation of the trainees.

Methods to define the scope of the necessary IT knowledge and skills of the students in their dynamics, enhancing key competencies, social participation, and the quality of life.

e-Services in society

Intelligent document retrieval and handling

Collaborative forms of learning

Innovative technology driven practices in education

Methods of organizing pedagogical interaction.

Optimizing the school network

Outlining the priorities in the general school education system.

Assessing students' achievements on the exit of educational levels

Professional qualification according to special programs.

Educational management of the content, technologies and organization of students' education.

Authoring tools for building electronic content

VII. CONCLUSIONS

The European Council recognized that there is a high risk of an increasing European digital divide when a European knowledge society is built without proper preparation and support from school age and lifelong. Public authorities had to use "various instruments at their disposal, such as legislation, standardization and certification as well as public procurement". The Digital Agenda for Europe (2010-2020) is also dedicated to enhance e-skills from school age and live long. It gives digital literacy and skills a priority of the "New skills for new jobs" flagship.

Thus the establishing of e-facilitator in school as a key player in students' Professional orientation and training, teachers' technological and methodological consultation and establishment of vocational training sites in schools, using centralized LMS with authoring studios for creating digital content is a new step of support of Digital Agenda for Europe 2020 in school.

It contributes straight to these goals by positioning a new branch of the e-facilitator's profession in school with innovative curriculum and goals, promoting their recognition and by further developing e-facilitators professional profile.

The e-facilitator in school directly contributes to the "New Skills for New Jobs" initiative of the European Commission and especially in the part "application of technologies, especially ICT, and changes in work organization" and other factors triggering a "growing demand from employers for transversal key competences already in school level of education.

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