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Vilhelmina Vaičiūnienė, Viktorija Mažeikienė,  
Giedrė Valūnaitė Oleškevičienė

**SOCIAL MEDIA  
IN ADULT EDUCATION**

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### *Editors*

Assoc. Prof. Dr. Lora Tamošiūnienė  
Assoc. Prof. Dr. Vilhelmina Vaičiūnienė  
Giedrė Valūnaitė Oleškevičienė

### *Contributing Authors*

Assoc. Prof. Dr. Vilhelmina Vaičiūnienė  
Viktorija Mažeikienė  
Giedrė Valūnaitė Oleškevičienė

### *Reviewers*

Prof. Dr. Jolita Šliogerienė, Mykolas Romeris University  
Prof. Dr. Genutė Gedvilienė, Vytautas Didysis University

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## PREFACE

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The study is a result of the research carried out within the framework of Grundtvig multilateral partnership project “Institutional Strategies Targeting the Uptake of Social Networking in Adult Education (ISTUS)” (project No. LLP-GRU-MP-2011-LT-00034). The project partners collaborated for three years aiming to outline the possibilities of social media adoption in adult education. The project focused on the uptake of social media through identifying experiences, criteria, arguments and conditions for the choice of social media.

The study analyses the use of social media in adult education and contains theoretical and practical ideas based on research findings. The ways of mastering new social technologies could ensure better quality of life and education. The application of social media could help students and lecturers gain some benefit seeking teaching/learning goals in the virtual environment of social media.

The study contains five chapters which focus on theoretical background giving explicit understanding of social media and its use in adult education (Chapter 1), ICT role in adult education (Chapter 2), the importance of information literacy (Chapter 3) and various modes of teaching/learning in formal education settings (Chapters 4). Firstly, the focus is on the concept of social media, revealing the versatility of the concept and the ways how social media could be integrated in adult education. Then ICT role in social life and education is highlighted and the necessity of information literacy skills is revealed as it is crucial in using social media for learning or personal purposes. The following chapter analyzes the connection of social media use with the central paradigms of adult education. Finally, the empirical research composed of two stages (Chapter 5) is presented containing the research methodology, data collection and discussion of the research findings. An extensive summary in Lithuanian is presented at the end of the study.

The study is expected to provide a thorough analysis of the phenomenon of social media use in adult education and envision the possible ways of successful application of social media in adult education by giving some practical insights.

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## INTRODUCTION

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Our world as well as educational processes has been changed by the emergence of Web 2.0 technologies and their applications such as social media. Some theoreticians and researchers explore the ways how mastering new social technologies could ensure better quality of life. Other researchers try to warn against the risk of mixing reality with illusionary concepts, the appearance of simulated reality which leads to implementation of manipulative projects distorting natural human life. Despite the variety of the attitudes the role of social media is increasing and it is changing the ways people accept and process information.

According to the recent research approximately 95% of young people (age groups 13-17 and 18-29) use social media regularly (Lenhart, 2010). Applications of Web 2.0 technologies get applied more and more in our daily lives, especially in the lives of young people in various places and various social contexts (Hargittai, 2007). The generation of future students is already using social media actively. They are using digital media and creating digital content.

The potential offered by Web 2.0 technologies, which changes social distributions, creates new possibilities and re-moulds our links with objects, places and each other, is not sufficiently explored (Beer and Burrows, 2007). Research into the impact of social media on pedagogics and social links in education is a growing research field (Selwyn 2007).

Lifelong education covers “formal, non-formal and informal patterns of learning throughout the life cycle of an individual for the conscious and continuous enhancement of the quality of life, his own and that of society” (Dave, 1976). Adult education institutions in the light of lifelong learning face the inevitable need to embrace social media realizing that social media-based adult education approaches have the potential to exploit many of the strategic opportunities. The research on social media uptake in adult education has been carried out within the framework of the *Grundtvig* learning partnership project “Institutional Strategies Targeting the Uptake of Social Networking in Adult Education (ISTUS)”. Its purpose is to suggest how adult education institutions can

use social media to promote educational processes bearing in mind that new technologies and software under the Web 2.0 umbrella have a strong impact on adult education, independent learning, digital literacy, lifelong learning, teaching approaches, and institutional strategies.

The research object in the study is social media in adult education with the research aim to examine how social media impacts adult education. Research objectives include:

- Defining understanding of social media
- Examining ICT and social media connections
- Identifying relation and interaction between information literacy and social media
- Revealing social media role in formal education
- Identifying to what extent social media promotes adult education.



## CONCEPTS USED IN THE STUDY

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**Social media** embraces various forms of electronic communication (as websites for social networking and microblogging) through which users create online communities to share information, ideas, personal messages, and other content (as videos) (according to Merriam-Webster dictionary).

**Adult education** is the process by which men and women (alone, in groups, or in institutional settings) seek to improve themselves or their society by increasing their skill, knowledge, or sensitiveness; or it is any process by which individuals, groups, or institutions try to help men and women improve in these ways. The fundamental system of practice of the field, if it has one, must be discerned by probing beneath many different surface realities to identify a basic unity of process. (Houle, 1996).

**ICT (information and communications technology – or technologies)** is an umbrella term that includes any communication device or application, encompassing: radio, television, cellular phones, computer and network hardware and software, satellite systems and so on, as well as the various services and applications associated with them, such as videoconferencing and distance learning (Rouse, 2005).

**Information literacy** is a set of abilities requiring an individual to recognize when information is needed and have the ability to locate, evaluate and use effectively the needed information (American Library Association, 1989).

**Information society** is a knowledge-based society, open, educated and learning society whose members can and are able to use effectively both national and global computerized information resources in all their activities. (Lithuanian Information Society Development Strategic Plan (Government Regulation No. 984, 2001).

**Formal education** is organized education, guided by a formal curriculum, leading to a formally recognized credential such as a high school completion diploma or a degree, and often guided and recognized by government at some level. Teachers are usually trained as professionals in some way (Livingstone, 2007).

**Lifelong learning** is seen as a holistic view of education and recognises learning from different environments. It consists of two dimensions 1. lifelong learning recognising that individuals learn throughout a lifetime; 2. life-wide learning recognising the formal, non-formal and informal settings (Skolverket, 2000).

## **CHAPTER 1**

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# THE CONCEPT OF SOCIAL MEDIA

To quote McLuhan (2003) people are creating technologies and then technologies are creating people. We become what we are looking at. McLuhan spoke about media having in mind means of information and communication, means which have multiple channels, carry multiple meanings and induce multiple intersections of meanings and messages this way constantly creating new messages new meanings and new knowledge. Due to the development of technologies media turned into social media which itself is in the process of ongoing change and evolution. It allows users to interact with each other with no limitation of space in real time. The emergence of social media is closely connected with the development of Web 2.0 technologies. LeNoue, Hall, and Eighmy (2011) characterize Web 2.0 in the following way, “these applications have provided Internet users with the ability to easily create, contribute, communicate, and collaborate in the online environment without need for specialized programming knowledge’.

### **1.1. Social media definition**

Social media includes numerous applications such as wiki, blogging, social networking, podcasting, etc. Kaplan and Haenlein (2010) distinguish six different types of social media: collaborative projects, blogs and microblogs, content communities, social networking sites, virtual game worlds, and virtual communities. Various technologies list blogs, picture-sharing, vlogs, wall-postings, email, instant messaging, music-sharing, crowdsourcing, etc. The evolution of social media causes the ongoing development of social media definition. Thus numerous definitions of social media could be found online. According to Merriam-Webster dictionary, social media embraces various “forms of electronic communication (as websites for social networking and microblogging) through which users create online communities to share information, ideas, personal messages, and other content (as videos).”

Boyd and Ellison (2007) define social network sites as “web-based services that allow individuals to construct a public or semi-public profile within a bounded system, articulate a list of other users with whom

they share a connection, and view and traverse their list of connections and those made by others within the system.’

Both definitions identify social networking as a basic example of social media. However, social media makes avail of more applications than just social networking and with the development of social media the applications are evolving and changing. Kaplan and Haenlein (2010) define social media as “a group of Internet-based applications that build on the ideological and technological foundations of Web 2.0, which allows the creation and exchange of user-generated content.” The common thought relating definitions of social media is the blend of information technologies and social interaction leading to co-creation of content and knowledge. User generated content becomes the main feature of social media, what is more the content could be changed, redefined, improved and modified by multiple users. Technology allows users connect in the process of content creation and using multiple channels constantly modify and change it. Social media broadens the range of traditional media based on television, radio, newspapers and other print publications. Both traditional and social media have the ability to reach broad global audiences, However, social media does it at almost no cost or special resources. Social media has an inherent democratic nature and users can actively participate without special training or qualification or even permission to publish their material. Immediacy and recency are additional features differentiating social media from the traditional one. Participants in social media can publish and comment their immediate events, the reactions are instantaneous and the process of creation is in constant continuum. Refashioning is another feature of social media whereas traditional media once published is complicated to change. Social media allows the participants to comment change and rearrange its content. Social media provides an open space where people can exchange their ideas and opinions.

Kietzmann and Hermkens (2011) include in the framework of social media the following functional blocks: identity which represents how users construct their personal representation; conversations which represent how users communicate, converse with others; sharing which represents information bits which users present, share with others allow-

ing other users to modify the shared content; presence which represents the accessibility of users to others; relationships which represent how users relate to each other; reputation which mostly represents trustworthiness of users and groups which represent user formed communities or sub-communities.

## 1.2. Social media in education

Rapid development of Web 2.0 technologies and their applications such as social media means that it is important to form understanding about the effective use of these technologies in educational processes (De Rossi, 2007). Social media involves billions of users and the numbers are rapidly increasing. Future student generation already actively participates in social media and start creating digital content. At present various technologies and their applications enhanced by Web 2.0 possibilities are gaining more and more importance because they promote digital literacy and act as effective means of teaching/learning. Educational institutions are able to apply Web 2.0 provided advantages such as simple and fast creation of micro content, social factor which ensures instantaneous communication and feedback which in their own turn promote further creation and improvement of digital content as well improving communicative skills which are very important in the study process (Scardamalia, 2002). Educational institutions face the opportunity to use social media in the study process and some institutions start using it, naturally, different institutions choose different ways of using social media. Some institutions in the attempt to create a safe study environment choose to build their own inner social networks, others choose integrative approach and use already existing social media open to the public and try moving the study process into the public space creating studying communities there. It is important to collect and compare positive experience of various institutions using social media.

Theoretical research of social media use in the study process and practical experience analysis would allow foresee and suggest successful and effective scenarios of the technology use. This is especially important in bridging formal and informal education (Burkšaitienė, 2004). Social

media could be used as a component of informal education in the process of formal studies fostering creative student collaboration in informal environment. If we think how collaboration takes place in the real life situations: students consult each other, discuss and finally creatively apply the new ideas creating new content and new knowledge at the same time learning from each other. The aim of learning is knowledge preservation, transmission and creative application, so we expect the students to memorize the new information during the study process and apply it appropriately later. Social interaction enhances the process of learning (Paiva Franco, 2008). Common work allows to accommodate different attitudes, negotiate and discuss and to achieve common understanding. Common goals fasten the process of learning allowing the application of conceptual knowledge in solving important problems. The activities of formal education relate successfully with the activities in social media. Social media allows the use of external sources and relocates teaching/learning from formal classroom into informal situation of real communication on social media. Learners get to know each other informally and sometimes student hobbies and additional knowledge provide an easier approach to a task and facilitate the study process. Social relations can make the basis of informal learning. Using the Internet technologies it is possible to create a learning community online as a supplement to classroom activities.

New Web 2.0 technologies opened the way for modern forms of communication and creative cooperation on the Internet. Social media has become an exceptional example of the application of new technologies. Many education practitioners and experts suppose that the use of social media in the study process poses an essential challenge to educational institutions how to use social media and integrate it into sustainable study process. Social media acts a driving force itself because it was created outside educational institutions; however, social media can have a great influence on education by relating and integrating formal and informal learning. Tools of social media could also be used for developing skills of creative collaboration integrating them into project work methodology. Creativity in learning process means a new application of new knowledge for the learner, creativity becomes transversal skill in educational processes (Scardamalia, 2002). This skill is most important in the study

process as it requires the highest degree of thinking and encourages the learner to find new ways of learning. Thus, using information technology tools for problem solving and project implementation students demonstrate a high degree of creativity which could be integrated into the successful study process. Contacting experts, peers and additional sources of information gives more interest and value to the learning process. Learners can compare their work with peer achievements in a wider context. Students have a possibility to experience what their work look like in the context of the study subject and this gives additional value to the study process. Learners can publish their work in the public internet space and this stimulates student understanding of importance of their work in a wider context. In such a way real information exchange is promoted as well as higher level of collaboration and creativity.

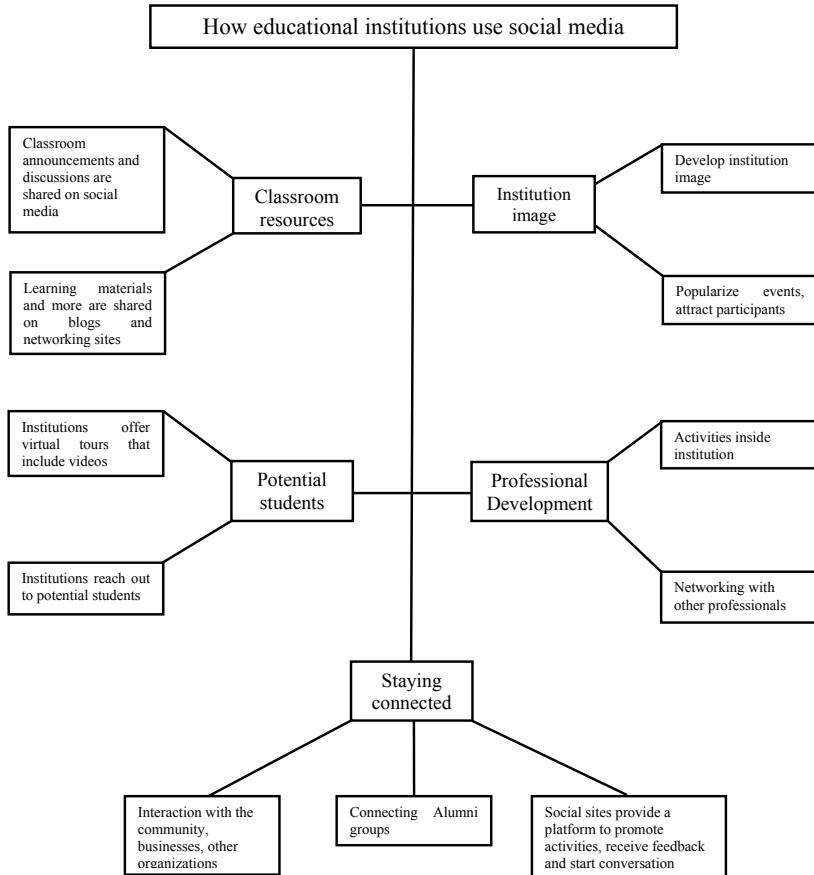
Recently there have been my discussions on the use of social media in adult education. Although the use of social media in the study process has many advantages, on the theoretical level there still remain some essential questions. Traditional education organization is highly structured what concerns the content and study process whereas social media use requires less control over the user generated content which poses a challenge to the traditional understanding of the effective teaching/learning control. "As it could have been expected, traditional academic institutions usually have a suspicious view towards social media existence in the lives of their students, however, now they have to review all the new aspects and consequences of new technology generated communication which is so popular among the young generation" (De Rossi, 2007). Thus there arises the question of how the process of free generation of the digital content could be integrated into the traditional teaching/learning environment, if the skills acquired in social media suit the traditional teaching/learning environment.

Actually social learning theory is not new, its underlying approach admits that social communication is the basis of the effective learning and learning does not happen in isolation. As Paiva Franco (2008) states in his article about e-learning "social interaction promoting cognition is essentially important to ensure the learning process either in real or on-line auditorium." This approach is based on Vygotskian proximate zone



development theory which Paiva Franco (2008) refers to “distance between what the students are able to achieve themselves and what they can achieve with the help of others allows us to understand how socio-constructivist environment can provide productive learning possibilities.” Students in digital environment really profit communicating with their peers and lecturers who could enable the students to achieve a higher level of understanding. Online discussions enable students to improve their literacy skills. However, the question arises if social media ensures the appropriate context in which skills of social communication could be developed creating appropriate environment for study.

De Rossi (2007) analyses the new applications of social media in education and identifies that students use social media for communication, collaboration and creation of digital knowledge. They use social media for achieving the result of creative projects as learning is not only studying from textbooks but also communication and interaction. Until recently communication in learning has been limited to the physical space of a classroom. However, the appearance of social media has widened the space available for the social component in learning. The most popular social media used in education includes blogging, facebook, twitter, LinkedIn, google+. The use of social media in education requires focusing on the interests and needs of the students as well as enhancing connections with the students not only due to physical presence in the classroom.



**Figure 1. Social media use in educational institutions**  
 (After: <http://www.onlineuniversities.com/>)

Social media according to Marquis (2007) is used by educational institutions in many ways (see Figure 1):

- Classroom resources: a) sharing announcements and discussions, b) various sites to access important resources, information research
- Institution image: to popularize events, attract participants, develop institution representation

- Reaching out for future students: information on the institution, virtual tours, videos
- Professional development: a) information the activities inside institution, b) collaboration with professionals from other institutions, networking with other professionals
- Staying connected: a) further interaction through various groups, blogging, conversing, exchanging ideas, getting feedback, b) interaction with the community, various businesses and other organizations, c) connecting alumni groups

### 1.3. Integrating social media in teaching/learning

Application of social media in teaching/learning requires careful consideration from the teaching professionals. It is necessary to find the appropriate tools to be used for certain purposes which requires the overview of what is being done in the study process and how social media could deepen and expand teaching and learning. Creating a learning network to keep the study participants informed as well is essential. Bernoff and Li (2008) suggest the key points teaching professionals should consider:

- Their audience, what additional support with social media technology people might need.
- The aim of teaching/learning, what is needed to be achieved and then choose social media tool
- The objectives: how information will be presented, how teacher/student and student/student communication will be enhanced, how student creation and use of social media will be supported
- Strategies how social media will be exploited in teaching/learning, e.g., collaborative writing, multimodal communication, online networking, etc.
- Technology of social media, e.g., a wiki, a community, blogs, etc. after identifying the audience, the aim, the objectives and strategies the technology is chosen

Speaking about teaching/learning objectives Bloom's taxonomy identifies a classification used by educators. Knowledge is related to the cognitive domain of the taxonomy, which is divided into six levels and

learning at higher levels depends on the previous knowledge gained at lower levels.

The first level deals with information, facts generally called knowledge. Next level represents comprehension, ability to understand facts, compare or interpret them. The third level deals with using the knowledge gained, solving problems via knowledge application. Then there is the ability of breaking information into parts, examining causes and effects so called analysis level. After that synthesis level is represented via compiling information together and combining the elements into new patterns creating alternative solutions, and finally, there is evaluation related to making judgments about information and validity of the ideas. The Bloom's taxonomy (see Table 1) is presented below.

**Table 1.** Bloom's Taxonomy

|         | <b>Levels</b>          | <b>Verbs</b>   |
|---------|------------------------|--|
| Lowest  | • <b>Knowledge</b>     | List, define, tell, describe, identify, show, collect, quote, name                                 |
| ↓       | • <b>Comprehension</b> | Explain, discuss, compare, interpret, describe, contrast, outline, restate, summarize, distinguish |
| ↓       | • <b>Application</b>   | Apply, demonstrate, complete, illustrate, show, solve, examine, modify, relate, change             |
| ↓       | • <b>Analysis</b>      | Analyze, explain, arrange, select, separate, connect, infer, order, classify, compare, debate      |
| ↓       | • <b>Synthesis</b>     | Combine, rearrange, create, rewrite, design, integrate, compose, modify, plan, invent, generalize  |
| Highest | • <b>Evaluation</b>    | Assess, grade, recommend, decide, test, convince, support, measure, select, conclude               |

Bloom's taxonomy was revised in 1990 and published in 2001 (see Table 2). It suggests using verbs rather than nouns in the categorization and rearranging the sequence of the categories into the increasing order and revising the category of highest position. Creativity is considered to be higher in the cognitive domain than evaluation.

**Table 2.** Bloom’s Revised Taxonomy

|                              |                      |
|------------------------------|----------------------|
| Higher Order Thinking Skills | <b>Creating</b>      |
| ↑                            | <b>Evaluating</b>    |
| ↑                            | <b>Analyzing</b>     |
| ↑                            | <b>Applying</b>      |
| ↑                            | <b>Understanding</b> |
| Lower Order Thinking Skills  | <b>Remembering</b>   |

One of the key revisions of Bloom’s taxonomy was the change of the levels into verbs representing actions.

Creating – designing, constructing, planning, producing, inventing, devising, making

Evaluating – checking, hypothesizing, critiquing, experimenting, judging, testing, detecting, monitoring

Analyzing – comparing, organizing, deconstructing, attributing, outlining, finding, structuring, integrating

Applying – implementing, carrying out, using, executing

Understanding – interpreting, summarizing, inferring, paraphrasing, classifying, comparing, explaining, exemplifying

Remembering – recognizing, listing, describing, identifying, retrieving, naming, locating, finding

The verbs describe the action and the activities pursued in the educational processes. However, the emergence of social media and its application in education causes to revise the objectives, action and activities within the framework of social media. Hence Bloom’s taxonomy was digitized and suggested a model of digital taxonomy addressing the aspects of social media incorporation into education. (Figure 2)



Figure 2. Pyramid of Bloom’s revised digital taxonomy

Source: <http://www.usi.edu/distance/bloom%20pyramid.jpg>

I transformed the pyramid (see Figure 2) into the following table (see Table 3), so that the new digital taxonomy could be better compared to Bloom’s taxonomy presenting some of social media tools which match the taxonomical level and could be integrated in educational activities.

**Table 3.** Social media tools based on Bloom’s Revised Digital Taxonomy

| Levels            | Tools   |
|-------------------|---|
| <b>Creating</b>   | Prezi for preparing presentations<br>Wikispaces for collaborative contributions<br><i>Key words: adopt, compile, compose, create, design, generate, invent, make, model, organize, plan, portray, publish, revise, rewrite, synthesize, write</i>           |
| <b>Evaluating</b> | SurveyMonkey for making surveys, evaluating opinions<br>Youtube for evaluating ideas<br><i>Key words: assess, compare, consider, contrast, critique, debase, evaluate, explain, interpret, justify, prioritize, prove, recommend, relate, support, test</i> |

| Levels               | Tools   |
|----------------------|---|
| <b>Analyzing</b>     | Exploratree for building portfolios of useful thinking guides, analyzing the different perspectives<br><i>Key words: analyze, classify, compare, contrast, correlate, differentiate, examine, group, identify, order, outline, select, sequence, sort, survey</i> |
| <b>Applying</b>      | Wikipedia for choosing and adapting information<br><i>Key words: adapt, choose, construct, determine, develop organize, practice, predict, present, produce, select, show, sketch, respond</i>  |
| <b>Understanding</b> | Bubble.us for creating mind maps<br>The Periodic Table of Videos for watching and understanding<br><i>Key words: compare, conclude, contrast, define, describe, estimate, explain, identify, interpret, paraphrase, summarize, understand</i>                     |
| <b>Remembering</b>   | Delicious for social bookmarking<br>Flickr for sharing photos<br><i>Key words: define, describe, find, identify, label, list, match, name, select, show, tell, write</i>  |

Adjustment of various social media tools to Bloom’s taxonomy teaching/learning objectives provides a sound basis for social media integration in teaching/learning processes. Integration of social media in education has multiple reasons. First, social media is already used by multiple audiences and it is free. Next, social media tools cover the whole range of Bloom’s taxonomy teaching/learning objectives and could play a key role in developing students’ higher level learning skills, creativity and collaboration. In adult education as an important segment of the broad education scale social media supports the diverse needs of adults in their personal and professional life, increases digital and social media skills required for employment in the modern information age. Finally, social media inevitably enters adult education arena and changes the character of education itself.

## **CHAPTER 2**

---

# **THE ROLE OF ICT IN ADULT EDUCATION**



The application of ICT as a driving force implying fundamental changes in education has been discussed since the last decade of the 20<sup>th</sup> century. The *information society* is a qualitatively new stage of societal development that intensively uses, applies information in learning, work and social life settings. The direction towards the value-based priorities in the information and knowledge-based society marks the shift of research interest attached to technologies towards the content of and access to information.

Globalization and modernization are creating a very much diversified and networked world and brings new communication means. Web 2.0 technologies have entered the educational space, but their scope and impact on education in general and learning are under permanent discussion. Today's Web 2.0 provides users with a greater capacity and raises the level of application, interactivity, interaction, participation. Social networks are recognized as a social phenomenon and rapidly developing trend. These new social, political and work settings require mastering state of the art technologies that are developing with an enormous speed and also processing large amounts of available information. With the advent of Web 2.0 tools information literacy has become as important as never before.

In this context, the competences required for adult learners seeking their purposes are increasingly complex, requiring deeper knowledge and skills, rather than narrowly defined skill mastery. In order to create a democratic system of governance in which active, critical and independent citizens work, live and learn, much more attention should be paid to development of modern world competences.

## 2.1. Research on ICT application

*Marking the shift of researchers' interest from the use of technologies in education towards information as the resource in the construction of knowledge, information, its content with emphasis on the knowledge society values, accessibility, scope and diversity of formats have occurred in the focus of present day research. Significance of ICT has been highlighted by many educational scholars who claim that ICT is influencing*

pedagogy in parallel with changes in teachers' practice, thinking, approach, roles and methods of technology use (Hennesy et al., 2005; Tinio, 2008). ICT in education increases flexibility, quality and efficiency. However, many UK education professionals, whose attention is focused on the value of ICT for learning, criticize research superficiality and a narrow field of study, for not revealing the most important issues related to ICT application and training: 1) lack of research instruments to measure technological efficiency, 2) why innovation effect can be observed only in particular settings with particular students, but is ineffective in other settings, or 3) with other students (Underwood, 2004). It is worth mentioning that British educationalists' approach towards ICT is much more sceptical compared to the viewpoint prevailing among American scholars.

Studies conducted in countries with considerable experience in the area of ICT analyze the benefits of information communication technologies for learning process, learning outcomes and also problematic aspects, such as the lack of comprehensive studies on ICT and e-learning emphasizing that little attention is paid to ICT application social and value issues. This is especially relevant for adult learning research. Most studies on ICT application in education are limited to the UK and USA (Ting Seng Eng, 2005). Yet, UK researchers stress the lack of effective measurement instruments related to ICT use and theoretical justification for e-learning (Underwood and Dillon, 2004; Underwood, 2004; Pittard, 2004). Gardner and Galanouli (2004, cited in Underwood and Dillon, 2004) spell out their concern about the fragmented nature of research on educational impact of ICT use. The instrument development and theoretical justification for the use of ICT is a relevant issue of this research domain, since "the technology is becoming the key, not a marginal feature of education provision" (Pittard, 2004, p. 182). The research data are becoming increasingly important for e-learning policy makers and practitioners. Information technologies provide with a variety of opportunities and forms of learning; therefore it is a highly important factor, influencing learning from the cultural, social and value perspective (Hennesy et al., 2005; Macdonald, 2004; Heemskerk, 2005). Selwyn et al. (2006) who have been researching adult learners argue that the question

of ICT use has to be based on the premise of being viewed from socio-cultural, economic, political perspectives. Similar view is observed in Tinio (2003) who stresses the interrelation between ICT, education quality and workplace. “Different ICTs are said to help expand access to education, strengthen the relevance of education to the increasingly digital workplace, and raise educational quality by, among others, helping to make teaching and learning into an engaging, active process connected to real life” (Tinio, 2003, p. 3).

Van Den Hooff (2005) conducted a longitudinal study to investigate the impact of ICT use (e-mail) on the organization and application, treating it as a learning process. The investigator’s empirical data collected in 1993-2000 confirmed that technological innovation affects the learning process. This author refers to Orlikowski (1992), “the structured technology model” and builds on two fundamental premises defining and arguing that the use of ICT (e-mail) incorporates the use of interaction between the organizational context and technological characteristics:

1. *Duality of technology*: the technology is the result of human action and the means for people to make some kind of action.
2. *Interpretative flexibility of technology*: the interaction between technology and the organization of individual actors’ function which determines the application of the social and historical context.

Moreover, T. Bates (1999), practitioner and theorist of information technology application, emphasizes such key characteristics and reasons of technology development:

- increased flexibility in learning, which manifests itself through new markets and an emphasis on lifelong learning market;
- the use of multimedia, which is improved thanks to the psycho-motor and intellectual abilities;
- development of cooperation skills and knowledge management;
- global multicultural courses and program development;
- use of the Internet;
- use of web technologies.

A need for more long scale studies is based on such factors:

- monitoring and assessing learning process
- comparing the effects of different uses of ICT on the learning

- measuring the effects of the use of ICT on the curriculum
- identifying appropriate methods for measuring the effects of specific use of ICT (Ting Seng Eng, 2005).

Lemke (2002), examining the social impact of information technology on a person identified a number of factors that could be classified into a) positive and b) negative. Positive aspects include:

- Freedom (of expression)
- Immediacy (to communicate)
- proximity.

The negative aspects involve:

- Alienation
- superficiality of electronic communication
- Depression (less time is spent on human, natural contact).

Heemskerk et al. (2005) analyzed the literature and research studies in the field of ICT application in learning and development of educational technology tools, inclusion index of gender and cultural social aspects. In the discussion about ICT-related issues in scholarly literature analysis of approaches to ICT and ICT application in the activities are dominating, however the issues of the use of ICT tools and their impact on learners are not extensively explored. The authors note lack of researchers' attention and analysis related to the outcomes of ICT use in learning. There are very few studies on ICT educational tools design and its impact on learning. Very few empirical research studies focus on inclusion issues, cultural sensitivity in ICT educational material. There is a lack of empirical studies of ICT application from gender, educational attainment of cultural differences perspectives, specifically on how different cultures or learners come from different social classes communicate with the technology, what they are experiencing. It has been noted that educational software tends to be Eurocentric, male-oriented, which may be unacceptable in other than European culture, or by female learners (Roblyer et al., 1996; Adler, 1999; Larson, 1999; Gillani, 2000, cited by Heemskerk et al., 2005). Conversely, it is agreed that differentiation opportunities associated with positive student experience leads to the presumption that ICT helps create equality in education (BECTA, 2002).

Studies in Britain have revealed that the use of ICT is very much determined by the study area. Most widely used are: 1) Internet 2) computer communication, and 3) a virtual learning environment (VLE). Technologies which support learning and create simulated situations are mainly explored in technical science subjects, while humanities favour the Internet and computer communication. ICT is used in application of blended mode of learning, which has already become traditional combination of teaching and learning (Hammonds, 1999). Among the teachers technological fear and reluctance to apply technological tools have been observed, but the advent of technology is an inevitable process, which accelerates the convergence of entertainment, computer and wireless technology.

According to findings for the international comparative survey on the current and future use of ICT in Higher Education (2002) web resources are becoming a common phenomenon in the educational practice, whereas other ICT forms, such as wireless solutions and conferencing tools, are used little or in a much more limited extent. Respectively, Rennie and Mason (2004) claim that for adult learners formal online courses can have better learning outcomes than face-to-face teaching.

## 2.2. E-Learning and technology

Innovations and a paradigm shift in education are often related to the application of information and communication technologies (ICTs) and e-learning.

A comprehensive definition of e-learning is given by Tinio (2003, p. 4): “*E-learning* encompasses learning at all levels, both formal and non-formal, that uses an information network—the Internet, an intranet (LAN) or extranet (WAN)—whether wholly or in part, for course delivery, interaction and/or facilitation” (Tinio, 2003, p. 4). Another definition is focused more on tools rather than modes of study or place: “Electronic learning (e-learning) – refers to learning that takes place using technology, such as the internet, CD-ROMs and portable devices like mobile phones or MP3 players” (Dudeney and Hockly, 2007, p. 136). There are

other terms associated with e-learning: distance learning, open learning, online learning, blended learning, web-based learning.

Some researchers argue for online learning and highlight its beneficial aspects for adult learners. As information and communication technologies permeate our societies and communities, the role of the individual learner is highlighted. "Online learning is considered to be particularly appropriate for adult continuing education: it is more flexible than face-to-face teaching, it supports a self-directed approach to learning rather than a teacher directed approach and it facilitates choice and the use of a wide range of resources" (Mason, 2006). As information and communication technologies permeate our societies and communities, the role of the individual learner is highlighted.

E-learning is: a) based on the technology, pedagogically-oriented; b) understood as a social process; c) causes many organizational changes and teacher training (<http://www.elearningeuropa.info/>). E-learning has three main purposes:

- helping the individual to realize their potential and live a full life;
- reducing social exclusion among individuals and groups;
- ensuring compliance with the acquired skills and employers' needs.

The literature review and research findings confirm that the technology itself and the skills required to use it is not the end in itself, but rather an active expression of different areas of life.

ICT has been mainstreamed in adult education. ICTs provide wider and bigger choices of learning material that very often is not tailored to learning needs. Students, therefore, as processors of information, should be equipped with a certain level of information and technological skills.

ICTs are a potentially powerful tool for extending educational opportunities, both in formal and non-formal education. Tinio (2003) presents an extensive analysis of ICT role in education today with a special focus on learning modes, ICT in learning process, implications and challenges caused for policy makers, educationalists, teachers and students. The author provides with two favourable aspects supporting her views on ICT in learning: 1) anytime, anywhere; 2) access to remote learning resources. *Anytime, anywhere* includes: asynchronous learning, teleconferencing tool which can be used for learners who live geographically in

remote locations, multiple users, differences in time of instruction and students' learning. The second aspect *access to remote learning resources covers*: the Internet and the World Wide Web, a wealth of learning materials and resources, media tools, faster access to “resource persons—mentors, experts, researchers, professionals, business leaders, and peers”.

Globalization has produced outcomes and processes which make the learning of new skills and competencies of paramount importance. The use of ICT in teaching process requires an innovative approach to educational goals and the process itself.

*Tinio (2003) agrees that apart from advantages of ICT in education, mastery of technologies can raise graduates' competitiveness in the global market. However, the author suggests that technological literacy is just among many other skills that future workers will need.*

*“One of the most commonly cited reasons for using ICTs in the classroom has been to better prepare the current generation of students for a workplace where ICTs, particularly computers, the Internet and related technologies, are becoming more and more ubiquitous. Technological literacy or the ability to use ICTs effectively and efficiently is thus seen as representing a competitive edge in an increasingly globalizing job market. Technological literacy, however, is not the only skill well-paying jobs in the new global economy will require” (Tinio, 2003, p. 6).*

Hammonds (1999) discussing the purposes of technology application in education, claims that higher education system functions in political, social and cultural context, which is fully influenced by the educational policies and practices. Over the last decades, ICT penetrated almost every sector of the global economy. The three factors ( 1) policy makers, 2) the development of technologies, 3) value system in learning) will not only be dependent on each other, but directly or indirectly determined by the use of technology in teaching. Hammonds identifies 12 key drivers of ICT in higher education sector:

1. Wider access and student diversity;
2. Access to employment;
3. Quality and standards;
4. Increased student IT literacy;
5. Students' expectations of the use of ICT;

6. Students are jointly employed;
7. Increased evening / part-time offer;
8. Learning globalization;
9. Teaching specialization;
10. Lack of trained personnel;
11. Services provided for larger groups;
12. The increase in IT literacy of new staff.

Increased staff and student IT literacy and a positive attitude to the role of ICT in adult education are attributable to the category of values, while the other drivers, such as globalization or lack of staff are attributable to changes in social, political and cultural context. ICT is used in applying blended nature, which is the traditional combination of using ICT in teaching and learning (Hammonds, 1999).

Ausburn (2004) who investigated American students in 2003 revealed that two-thirds of them relate e-learning with their long-term development perspective. This author emphasizes the unique needs and expectations of adult learners which differentiate them from younger learners. During this study the blended learning mode was used: e-learning (online) was combined with face to face learning elements. The researcher compared the experience of the research sample by gender, learning strategies and technological experience prior to the experimental course. The data revealed that adults have a positive attitude towards communication with their group participants and the teacher. It is important for them to take into account the multidimensional student learning objectives. Significant differences were observed between men and women: women expressed greater concern about the use of technology, while men needed faster and more efficient help in learning activities.

E-learning offers opportunities for learners to interact with each other and with teachers and provide a wide range of materials also create preconditions for deep learning. ICTs are closely associated with the e-learning and their analysis is often presented in an integrated manner. E-learning is based on the use of ICT and includes all electronic and interactive tools. Macdonald (2004) who investigated e-learning and evaluation aspects of e-learning environment, states: "... e-learning acquires the meaning of "a philosopher's stone for the future of higher education



and continuous learning, but there is still little consensus on the definition of the concept and efficient use of its implications”.

### **2.3. Social and value aspects of ICT integration into teaching/ learning process**

Scaffolding of learners by using modern technologies and information processing techniques stands as one of the major issues related to the quality of studies and adult learning. Moreover, holistic approach to ICT in education involves discussion about ICT integration into learning process from the perspective of social and cultural aspects of understanding, stressing values, on which education and decisions related to education should be made.

Technology integration perspective is important for learning, being an influencing and sometimes determining factor in terms of cultural, social and value aspects. These educational questions related to ICT were examined in Hennesy et al (2005), Macdonald (2004), Heemskerk (2005). They discuss such problematic issues as:

- Why it is worth using ICT;
- What teachers / lecturers' values are;
- How integration changes usual practice of class/audience;
- How ICT impacts the emergence of new teaching strategies;
- How they change the learning strategies, etc;
- What constraints and limitations the use of ICT presents.

Some of the above mentioned issues directly related to teaching and learning context will be further discussed. Studies in U.S. have revealed teachers' opinion that the use of ICT has caused obvious changes in class organization and management: technology has changed the role and authority of the teacher in the classroom conception; teachers recognized the new approach to teaching and need for information literacy skills (Kerr, 1991; cited in Hennesy et al, 2005). The British researchers identified essential constraints and also opportunities which new technologies create for teaching / learning of major disciplines in the conducted survey among British teachers. They researched teachers' perception of using ICT and impact on the subject didactics and technology integration

for education purposes. The findings proved that teachers' reluctance to abandon the existing pedagogy was a greater obstacle to the use of ICT in the classroom than limited technological resources. Cultural measures used to extend the cognitive abilities of learners invite to design a new approach to the acquisition of knowledge, critical thinking, and creative problem-solving. Selwyn states (1999 b, cited in Hennessey et al, 2005) that providing more software will not change the classroom didactics. Educational computing is actually technocentric, limiting the effectiveness of education. Researchers argue that policy makers who support integration of educational technology as an assistive learning tool and strategy of innovation should respect teachers' personal and professional beliefs.

Broadly speaking, some scholars are more interested in teachers' perceptions of technologies in education and there are others, who focus their attention on the relationship between ICT and the character of the study subject. These scholars investigating the application of technology in the classroom argue that the use of information technology is more acceptable to technical subjects according to their nature than other subjects, for example, such as humanities. Technology is viewed as an assistant explored in situations when it can effectively assist learning and does not become an end in itself.

Hennessey et al. (2005) analyzed the studies carried out in the use of ICT in teaching, pitfalls and weaknesses of research, which is usually directed to investigate the extent of the use of computers and their application methods, but does not focus on its meaning or relevance. Selwyn et al. (2006), investigating the problems of application of technology in adult learning, noted that the researchers trying to avoid discussion on negative findings or apparent deficiencies and seeking to establish positive and transformational ICT benefits often "lose their sense of objective criticism". Therefore, the lack of empirical research showing deficiencies and negative effects of the use of ICT is stressed. Furthermore, due to the rapid development information and communication technologies may become obsolete and outdated.

It is worth noting that the approach to ICT that exists in the UK is much more sceptical than in the U.S. (1999b Selwyn, Selwyn et al.,

2006; Hennessy, 2005). Selwyn et al. (2006) in their study of technology integration in adult learning emphasize that research in this area should be based on the premise that technology adoption issues in adult learning are intrinsically linked to the social, economic, political and cultural aspects that must be taken into consideration and while researching adult learners. These authors aimed to identify the patterns of adult use of ICT in different learning environments (at home, at work, elsewhere), what is the nature of technological applications, and how adults use technology in formal and non-formal learning settings. The survey questions were focused on whether the use of ICT hinders lifelong learning or reinforces the already existing nature of participation in lifelong learning.

Knowles (1975, cited in Ausburn, 2004) formulated the basic principles of adult learning, which are as follows:

- adult life experience as a source of knowledge;
- independence;
- autonomy;
- self-regulation.

Grounding on these principles it is obvious that ICT has the potential to support and facilitate adults' ways of learning and empower them as lifelong learners.

Many adult learners coming to the university today are able to use technological tools and they expect the same in the university space. Traditional teaching according to Pineteh, (2011) was focused on the teacher, limited in time, space and place. Today's learner-centred training is a collective, social process, which is constructed through a variety of social interactions in a traditional learning settings or in virtual environment.

ICTs also facilitate cognitive processes and assist in understanding professional challenges. Technology integration perspective is an important factor in studies and sometimes a determining factor from cultural, social and value viewpoint. The use of ICT in learning environments encourages rethinking many educational issues. Loveless (2005) emphasizes the favorable use of ICT in the educational process features a whole: cooperation, student autonomy, creativity, criticality, expressiveness. Jones (2004) argues that modern discussion has shifted from the interac-

tion between learners to interaction with the computer, using computers, the assumptions implicitly creating interaction with the information that is available through the various networks. The author analyzes the problems and online learning context of the networked society. It was found that the use of technology in the study process is meaningful only when it is socially constructed, encouraging reflective dialogue within a learning community. However, the international survey findings on the use of ICT in higher education confirm “that face-to-face interaction and direct communication between instructors and students and among students is still very important in the way in which instructors teach” (Collis and Wende, 2002).

#### **2.4. Web 2.0 in teaching/learning**

*Web 2.0* is an umbrella term which refers to a new generation of Internet tools. These tools differ from their predecessors in the degree to which they promote connectivity. *Web 2.0 openness* is crucial in current discussions about the use of Web 2.0 in education. Openness and *microcontent* combine into a larger conceptual strand of Web 2.0, one that sees users as playing more of a foundational role in information architecture. Drawing on the “wisdom of crowds” argument, Web 2.0 services respond more deeply to users than Web 1.0 services. In the past online tools focused on communication, content searches (web browsers, search engines) or content creation, the new generation of tools (blogs, wikis, social networks) integrate all these functions and above all link data.

Today, the new generation of Web sites gives power to the end-user, providing visitors with a new level of customization, interaction, and participation. Many Web sites now allow users to upload, categorize, and share content easily. Weblogs and podcasts allow anyone to publish or broadcast on any topic. These new technologies are changing our relationship to the Internet. Wikis provide information that is constantly updated by the end-user. Moreover, open-source software is free and customizable.

Web 2.0 has democratized content creation, making it possible for virtually anybody create and quickly share content. Web 2.0 tools offer great benefits to teachers and students:

- vast repositories of authentic material in multiple formats
- facilitate communication between people around the world
- allow students to create their own content quickly and professionally and shift classroom work from static course books to dynamic tasks.

Many educators are now stressing the importance of Web 2.0 tools in learning process: social networks, blogging, micro-blogging, instant messaging, etc. These tools being available in many modern colleges and universities create new opportunities for faster and more efficient learning (Software and Internet Analysis, 2009). However, the above mentioned survey proved, that “the use of e-mail and the use of Web resources is becoming a common phenomenon in educational practice, whereas other ICT forms, such as wireless solutions and conferencing tools, are used little or in a much more limited extent” (Software and Internet Analysis, 2009, p. 31).

Many educators are now stressing the importance of social networks, blogging, micro-blogging, instant messaging in learning process (Prensky, 2007; Kennedy, 2008; Kellner, 2000). Kellner notices the lack of research-based use of Web 2.0 tools in teaching/learning context. “Web 2.0 tools have entered the educational space; however, the scope of the application of the tools is under discussion so far” (Kellner, 2000, p. 248). However, O’Reilly (2005) observes that research of Web 2.0 is focused on the following parameters:

- Characteristics of Web 2.0
- Web 2.0 as a platform
- Collective intelligence.

All of these parameters are relevant in terms of didactical meaningfulness and therefore, require deeper analysis to answer such questions as to what extent and with what age learners Web 2.0 applications are the most beneficial.

Very often Web 2.0 concept is explained by contrasting and comparing it with the Web-1.0. Web 2.0 definition does not have clearly determined boundaries. Although there is no consensus on the term “Web 2.0

definition, but a number of researchers recognized O'Reilly's contribution. Alexander (2006) states that Web 2.0 applies to a multimodal combination of existing technologies and newly emerging ones. Web 1.0 is considered to be only the content, whereas today's Web provides users with all the power: raises to higher level of application, interactivity, interaction and participation.

O'Reilly and other authors distinguish three main axes highlighting the major differences between Web 1.0 and Web 2.0:

- Technology
- Structure
- Social aspects.

At present of all the new web technologies blogs and wikis are probably the most common and accepted. Mason (2006, p. 127) who researched adult learners provides with evidence of students' preferences to blogging arguing that: "Blogging equally has the potential to support the reflective principle in adult learning". The author looks at blogs as an „experiential learning tool" that can address andragogical principles: self directed learning, personal and workplace experiences.

Rennie and Mason (2004, p. 2) highlight the close link between Web 2.0 application and social constructivism claiming that: "Web 2.0 is a reflection of the collective learning activity". Web 2.0 tools and applications are inevitable means of teaching and learning today. Yet, methodological drawbacks of Web 2.0 tools and the impact of these tools on learners' progress require education researchers' further attention.

## **CHAPTER 3**

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# **INFORMATION LITERACY**

Information literacy (IL) has emerged as a modern world phenomenon influenced by societal, economic, political changes, development of sophisticated technologies, information overload, labour market demands and lifelong learning imperative.

Information literacy is determined by the of present time realities related to the latest technologies and abundance of information. These days, integration of information literacy in education has become a relevant issue closely interrelated with ICT application in teaching and learning process. Information literacy skills are considered fundamental in full time and continuous studies, open/flexible learning process, as well as in formal, informal non-formal and adult education environment. “The illiterate of the 21st century, according to futurist Alvin Toffler, “will not be those who cannot read and write, but those who cannot learn, unlearn, and relearn ” (cited in Tinio, 2003, p. 5).

### **3.1. The evolution of the concept**

The concept of literacy has been evolving over time. The scope of this concept has been broadened by present world demands and human development. Jovaiša (1993, p.198) defines literacy as “the level of education of the population that is determined by the capacity to read and write.” Information literacy as many other literacies (computer, IT, digital, etc.) is a literacy of modern epoch, which implies significantly higher educational standards than the ability to read and write.

The concept of information literacy phenomenon has been comprehensively discussed by C. Kulthau (1994); Ch. Bruce (1997); B. Johnston and S. Webber (2000, 2003) and others. The width of the term and its multi-faceted conceptualization have been analyzed in Doyle (1991, 1992); Eisenberg and Johnston (1996); Bruce (1997, 2000, 2002); Bundy (1998, 1999, 2004); Lupton (2002);Candy (2003, 2004); Johnston and Webber (2003); Eisenberg, Lowe, Spitzer (2004) studies. Information literacy in higher education has been standardised in USA, Australia, Great Britain and other countries. The standards being an efficient tool for improvement of studies serve as guidelines for assessment of students’ competences.



Paul Zurkovski (1974), the author of *information literacy* concept, introduced this term into a modern vocabulary and enhanced the implementation of information literacy in the United States. He gave such a description of information literacy:

*“People trained in the application of information resources to their work can be called information literate. They have learned techniques and skills for utilizing the wide range of information tools as well as primary sources in molding information-solutions to their problems” (cited in Eisenberg et al., 2004, p.3).*

ICT development and ultimately increase of information flows encouraged to analyze the concept of information literacy in the context of these factors. Information literacy as a phenomenon of recent times is changing the quality of modern life, education in particular. Candy (2003) highlights five dominant changes in our life affecting the understanding of learning and learning process in the contemporary society:

- changes in relationships within the family and community;
- unprecedented explosion of information;
- changing nature of work;
- globalization;
- new technologies.

In 1989 the National Forum on Information Literacy (US) which brings together 80 organizations (among them international), provided an information literate person’s definition: “The information literate person is able to understand the information needs, to locate, evaluate, and effectively use”.

The metaphor of information explosion described by such concepts or utterances as “information overload”, “information abundance”, “data smog” is a phenomenon of modern society, which is influenced by another phenomenon called emergence of “information anxiety” (Candy, 2003; Kapitzke, 2003), FOMO (fear of missing out), Facebook depression, etc. In the context of abundance of information the relevance of information literacy is unquestionable, emphasized as a response to the “information overload” (Bruce, 1997, 2000, 2002; Bundy, 1998; Candy, 2003).

Today there are a number of definitions that are widely accepted. There are certain elements that link all the definitions of information literacy:

- understanding the information need
- information search
- its use
- evaluation
- application for personal needs
- communication.

In 1989 American Library Association (ALA) worked out such a definition of information literacy:

*“Information literacy (IL) is a set of abilities requiring an individual to recognize when information is needed and have the ability to locate, evaluate and use effectively the needed information”*

(American Library Association, 1989, p. 11).

Information literacy is identified with such concepts as *computer literacy* or *IT literacy*, *information technology*, *electronic*, or *electronic information literacy*, *media literacy* (also called mass media literacy), *networked literacy* (online / hyper-literacy) *digital literacy* (digital-information literacy) or *informacy* (see Figure 3.). Bawden and Robinson (2002), Behrens (1994), Eisenberg et al. (2004) provide a comparative analysis of these concepts, highlighting vast coverage of information literacy concept and considering a broad and deep scope of the term that embraces all the above mentioned concepts.

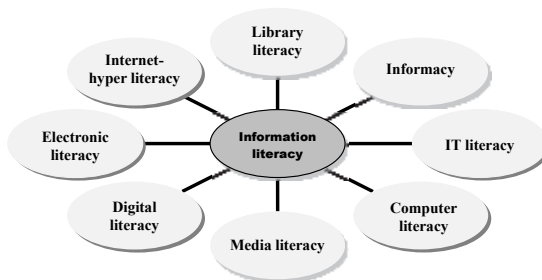


Figure 3. Information literacy concept

Literacies supported by skills (computer, IT, electronic, etc.) are characterized by specific capabilities, such as working with a computer, or searching information in the library. Conversely, information literacy embraces much more general personal abilities such as independent, self-directed learning, abilities to use information sources and the variety of its forms, and also demonstrating broad and deep knowledge of information world, internalization of the values that promote ethical and legal use of information. Information literacy is a much broader concept involving more specific literacies that are usually related to a particular area. Information literacy conception incorporates literacies, necessary to function successfully in modern society. Some authors argue that different ideas/understanding of information literacy and often too narrow interpretation of the concept encourages students' surface approach to learning, for example, understanding information literacy just as library instruction. A very wide understanding of information literacy concept which is in isolation from the learning process is also criticized (Bruce, 1997; Lupton, 2002; Bawden and Robinson, 2002; Johnston and Webber, 2003, 2004; Bundy, 2004). The significance of the term is associated with complexity of information environment, information products, digital space (Behrens, 1994; Bawden and Robinson, 2002). Generality of the concept covering computer skills, description of cognitive and metacognitive abilities in the light of learning to learn philosophy is criticized too (Boyce cited in Lupton, 2002) for being a vague concept and easily misinterpreted. These arguments confirm the complexity, ambiguity and scope of the term underlying it as an object of theoretical discussions among researchers from different domains (librarians, educationalists, practitioners, psychologists, etc.).

Information literacy and information technology skills are closely related, but the differences between them are obvious (see Figure 4.). Information literacy being a broader concept than IT literacy implies good knowledge of technology, conceptual knowledge and IT skills seeking smooth application of information technologies (National Research Council, 1999).

| Information literacy   | Technological (IT) literacy  |
|--|--|
| <ul style="list-style-type: none"> <li>• concept embraces the context, communication, analysis, information search and evaluation;</li> <li>• content can take many forms: text, images, video, and interactive multi-media products;</li> </ul> | <ul style="list-style-type: none"> <li>• includes competencies and skills to enable effective application of information technology;</li> <li>• use of technology involves a good understanding of technology (called fluency)</li> <li>• the skills to use them"</li> </ul> |

Figure 4. Comparison of Information and IT literacy

Behrens (1994), Bawden and Robinson (2002), Eisenberg et al. (2004) provide a comparative analysis of these concepts, highlighting substantial coverage of information literacy concept which joins all the other concepts. Boekhorst (cited in Virkus, 2003), referring to definitions developed by researchers presents three major concepts of information literacy (see Figure 5).



Figure 5. Information literacy concept analysis based on Boekhorst, 2003

- **The ICT concept:** Information literacy refers to the competence to use ICT to retrieve and disseminate information.
- **The information (re)sources concept:** information literacy refers to the competence to find and use information independently or with the aid of intermediaries.
- **The information process concept:** information literacy refers to the process of recognizing information need, retrieving, evaluating, us-

ing and disseminating of information to acquire or extend knowledge. This concept includes both the ICT and the information (re) sources concept and persons are considered as information systems that retrieve, evaluate, process and disseminate information to make decisions to survive, for self-actualisation and development.

The third concept (information process) focuses on information handling skills that cover technological skills as well as information which is usually accessed by using computers, the Internet and mobile technologies. The concept also involves higher order thinking skills (evaluation, making decisions) implying that information users should be critical, analytical thinkers. Thus, the first concept is related to ICT skills, whereas the second one implies the narrowest understanding of IL, limiting it just to two skills: to find information and to use it.

It should, however, be pointed out that some scholars have a very broad concept of information literacy, emphasising the impact of infor on the overall learning process (Bruce,1997; Lupton, 2002; Bawden and Robinson, 2002; Johnston and Webber, 2003, 2004; Bundy, 2004). As regards the importance of information literacy noted by many authors it is connected with the complexity of information environment, information products, digital environment (Bawden and Robinson, 2002; Behrens, 1994). However, the concept of information literacy has been criticized for uncertainty, apart from computer skills, it covers understanding of search engines, standards and cognitive and meta-cognitive learning descriptions in the light of learning philosophy (Boyce cited in Lupton, 2002).

Virkus (2003, p. 20) in his literature review of information literacy development in Europe suggests:

*“...among many definitions perhaps the most widely accepted and cited in Europe is that provided by the American Library Association (ALA) Presidential Committee on Information Literacy: “To be information literate, a person must be able to recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information” (ALA, 1989, p. 1). Although alternative definitions of information literacy have been offered by several institutions, organizations and indi-*

*viduals, there are strong similarities between the various statements and they are likely to stem from the definition offered by ALA”.*

Another author, Tinio (2003, p. 6) in her study on ICT in education discusses literacies and skills necessary for present day individuals and presents EnGauge of the North Central Regional Educational Laboratory (U.S.) identification of “21st Century Skills,” which includes:

- *digital age literacy* (consisting of functional literacy, visual literacy, scientific literacy, technological literacy, information literacy, cultural literacy, and global awareness),
- *inventive thinking,*
- *higher-order thinking and sound reasoning,*
- *effective communication,*
- *high productivity.*

This author presents six literacies necessary for the digital age workers:

*Functional literacy:* Ability to decipher meaning and express ideas in a range of media; this includes the use of images, graphics, video, charts and graphs or visual literacy

*Scientific literacy:* Understanding of both the theoretical and applied aspects of science and mathematics

*Technological literacy:* Competence in the use of information and communication technologies

*Information literacy:* Ability to find, evaluate and make appropriate use of information, including via the use of ICTs

*Cultural literacy:* Appreciation of the diversity of cultures

*Global awareness:* Understanding of how nations, corporations, and communities all over the world are interrelated.

Tinio provides a repertoire of literacies, viewing information literacy among the other literacies necessary for present time citizens.

In summary, information literacy being an umbrella term incorporates other literacies necessary in modern society. The concept of information literacy has evolved from a narrow understanding of library instruction, which included search for information and its access processes toward a wide, learner-centred learning paradigm, requiring meta analytical, critical thinking skills, learning to learn skills. Thus, the leap

in understanding information literacy implies the emphasis on learning effectiveness and skills needed for learning in a complex, multi-faceted and multimodal learning environment.

### 3.2. Historical overview of information literacy development and research

In many countries: USA, Australia, New Zealand as well as European countries information literacy has been standardized in all levels of education. The standards are an efficient tool for education development and improvement of study quality, and also they serve as guidelines for assessment of students' competencies.

From the viewpoint of scientific discourse information literacy is studied as:

- information handling process;
- set of information abilities, necessary in the course of information management process;
- information world phenomenon (see Figure 6).

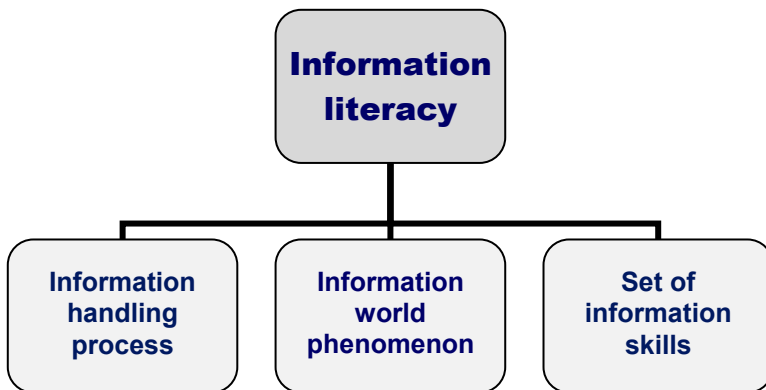


Figure 6. Information literacy research areas

Within these dimensions information literacy has been researched in many studies worldwide. Integration of information literacy into the study process at university suggesting to include information literacy as a

study subject in the university curriculum was discussed by Doyle (1992), Kuhlthau (1994, 1995, 2001), Johnston and Webber (2000, 2003, 2004), Eisenberg, Lowe and Spitzer (2004), who analysed mental processes occurring in the acquisition of information skills process with emphasis on reflection upon the studied content. Bruce (1997, 2001, 2002), Bundy (2004), Candy (2003, 2004) Johnston and Webber (2003) analysed information literacy conception. Doyle (1992) conducted a Delphi study of educational issues, interviewing a group of experts (USA ) and provided a detailed definition of information literate person, by listing identified knowledge and skills necessary for an information literate person. This definition is one of the most widely discussed.

**“An information literate person is one who:**

- *recognises that accurate and complete information is the basis for intelligent decision making*
- *recognises the need for information*
- *formulates questions based on information needs*
- *identifies potential sources of information*
- *develops successful search strategies*
- *accesses sources of information including computer-based and other technologies*
- *evaluates information*
- *organises information for practical application*
- *integrates new information into an existing body of knowledge [and]*
- *uses information in critical thinking and problem solving.”* (Doyle, 1992, p. 8).

The above mentioned definition elaborates and highlights the intellectual abilities, such as the “true value of information”, a constructivist approach to knowledge acquisition “integrates new information into an existing body of knowledge”. Literate in the field of information is the person who has all of the above mentioned competences and is able to effectively demonstrate them.

Bruce (1997) presents the picture of information literate person that consists of seven *intrinsic characteristics*:

- *engages in independent, self-directed learning-based;*
- *applies information processes;*



- *uses of information systems and technology diversity;*
- *internalizes (gain cultural) values, which promotes the use of information;*
- *acquires deep knowledge of the world of information;*
- *critically evaluates information;*
- *has a personal information style that facilitates his/her interaction with the world of information.*

Virkus focuses on research into information literacy in Europe and presents the major ideas and theoretical assumptions concerning the concept of information literacy and its development in different countries. In Europe information literacy as in other countries evolved from library instruction and user/reader education. “The information-literacy movement in European countries, similar to other countries, has evolved from precursors such as library instruction, bibliographic instruction and user/reader education“ (Fjällbrant and Malley, 1984; Rogers, 1994; Fjällbrant, 2000a; Homann, 2001; Sinikara and Järveläinen, 2003 cited in Virkus, 2003). The author states that information literacy initiatives in Europe are quite rare and fragmented.

Virkus (2003, p. 5) presents the analysis of research conducted in Europe and literature review from 1970 to 2003 using such keywords as “information literacy”, “information skills” and “information competence” for his search. The leading countries in this field are UK, Germany and Scandinavia where user education and suggested different types of courses and training were provided as early as 1980s. The reason of scarce attention and fragmented research is language barrier as most initiatives were conducted in national languages. The author studied a number of European countries: UK, Germany, Norway, Sweden, Denmark, Finland, Italy and France. Between the 1970s and 1980s some European universities launched user/reader education programmes. Virkus (2003, p. 6) highlights the main causes of greater attention and need for information literacy in modern world:

- information overload
- growth of digital information
- “information fatigue syndrome” (IFS)
- active, effective and responsible citizenship

- personal empowerment
- enriched life through lifelong learning.

The author also emphasises the social aspects of citizenship and imperative of lifelong learning as regards information literacy education.

Information literacy value aspect was examined by an American researcher Kulthau (1994, 2001), who conducted five-year-long library user behaviour research in information search and retrieval settings. Kuhlthau grounded information literacy theoretically and interpreted it as a learning method (Eisenberg et al., 2004). The author defines information literacy as knowledge, skills and value approach. Kulthau (2001) emphasized students' search for meaning in the context of information overload and importance of meaningful information use competence development. Students' behaviour during information retrieval process allowed to take a look at information literacy as a way of thinking which leads to becoming flexible thinkers and lifelong learners. She observed the research participants' activities when they addressed information problems in library environment, and recorded their feelings, resulting from the process. On the basis of these studies the author developed a seven-stage information search process model, called *Learning from the information process*. The researcher breaks down the analysis into three aspects:

- affective (feelings);
- cognitive (thoughts);
- physical (actions).

In the early search stage affective dimension (feelings) involves uncertainty, then passing to the optimism, confusion, doubt, clarity, sense of direction and at the end - satisfaction or frustration (depending on the result). Cognitive dimension (thoughts) at the beginning of the search stage includes vague idea, and then focused, at the end - the increased interest. Physical aspect (action) is important for information seeking and use of information retrieval and related documentation. At the beginning of information retrieval process students are worried and feel uncertain about their current role. This anxiety is getting worse, if students lack of understanding of technology and information sources. However, when students manage to narrow the research field the feeling of uncertainty

gives way to confidence. When the study is completed and the product is delivered students go through satisfaction or dissatisfaction stage in accordance with their perception of the success of work.

This researcher verified the results of her research in two more subsequent studies conducted with bigger research sample group. The results confirmed that information search is an affective process, which is strongly influenced by the information seeker's feelings (Eisenberg et al., 2004). It should be noted that the author's research validated the influence of affective dimension in learning and information retrieval process. Moreover, teachers and lecturers should be aware of its existence when giving students analytical, problem-solving or project-based tasks. Uncertainty can cause the desire to search for information needed to address the issue, but, on the other hand, can be the cause of negative emotions (distrust, anxiety) that may hinder learning.

Studies in many countries have proved that acquisition of information literacy abilities has a positive impact on the study process and increases students' competitive potential in the labour market.

British researchers Webber and Johnston (2002-2005) investigated the concept of and attitudes to information literacy of the academic community including teachers and librarians. The researchers applied phenomenographic research method seeking to answer the question whether respondents' understanding of information literacy corresponds to their teaching practices. The researchers tried to discover variations of experiencing information literacy phenomenon among teachers and librarians by grouping interviewees from twenty-six British universities according to the typology of sciences developed by Becher (1989): Pure Technical (hard pure), Applied Technical (pure applied), Pure Humanities (soft pure) and Applied Humanities (applied pure). The study highlighted the importance of cooperation between librarians and teachers delivering information literacy programs and practical training in the application academic activities. The level of university students' information literacy has been intensively researched in the U.S. According to the survey conducted by the American Association for Higher Education in 2001 less than half of high school graduates (48 per cent) were firmly convinced of the ability to find information for their research topic. The survey findings

of 2002 show that 31 per cent of the questioned respondents, who used the Internet search engines, experienced frustration when their search failed. Most students, even after graduation do not possess transferable skills necessary to manage information in today's society. Research findings from the conducted study in California State University in 2000 and subsequently in 2001 indicate that university students at the beginning of their studies do not have the basic information literacy skills: critical thinking, decision-making and self-directed learning (Rockman, 2004, p. 14). Moreover, students were not able to verify whether information was reliable, valid or accurate. Rockman (2004) argues that students were able to send e-mail messages, chat via e-mail, download music from the Internet, but many of the surveyed respondents could not efficiently locate information, evaluate, use that information for their original work or properly cite sources of information. In addition, due to the large amounts of information that students need to cope with, they suffer from psychological problems.

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### **3.3. Importance of social skills for information literacy development**

In the environment of rapid technological development and emergence of a variety of information sources and formats the relevance of

information literacy is discussed as student empowerment factor affecting the quality of studies that changes university education culture and to a large extent contributes to formation of this culture. Australian and New Zealand (ANZIL) information literacy model for Higher Education, based on constructivist assumptions and four principles, states that the information literate person:

- engages in independent learning, constructing new meaning, understanding, and knowledge;
  - uses information wisely, experiencing a sense of personal satisfaction;
  - seeks out and uses the material for decision-making and problem-solving to responding to personal, professional and societal questions individually and collectively;
  - demonstrates social responsibility committing to lifelong learning and participation in the community (ANZIL model, 2004, 11p.).

Social skills such as cooperation, communication are an integral component of information literacy (Gedvilienė, Vaičiūnienė, 2005). Therefore, information literacy development is inseparable from the development of social skills.

Information search and detection is defined as a communicative act within the social context in which communication takes place and the transformation of personal knowledge (Nahl, 2001). The information user involved in a communicative act has a certain intention. The opportunity for students to interact with each other and with teachers, providing a wide range of materials creates preconditions for deep learning (Laurillard, 1993, p.72). Thus, social skills acquire a value aspect and should be considered in an educational context. This is especially important in view of change in learning and university education paradigm seeking to link studies with the realities of their chosen profession in an attempt to discover effective teaching and learning methods (Vaičiūnienė, Gedvilienė, 2011). Deep and systematic research analysis of information user behaviour is needed in order to raise the efficiency and quality of information access and improvement of learning process. Compared with the traditional learning methods, technology enables the

learner to quickly understand study subjects and acquire knowledge and skills.

Such authors as R. Audunson and R. Nordlie (2003), S. Virkus (2003) and others highlight social aspects of information literacy:

- the exchange of information;
- communication;
- work in groups;
- social skills as an integral component of information literacy.

Communication competence is distinguished as one of the three (technical skills, communication competence, intellectual ability) basic information literacy categories (Audunson and Nordlie, 2003). S. Virkus (2003) recommends considering information competences depending on the context and content. Information literacy has become a relevant aspect of the study process. Moreover, these competences describe constructive learners, and the concept of information literacy as a term covering information competences, which in turn include skills, abilities, attitudes and values. There is a definite need for these skills in a constantly changing work environment, so their training in education could be emphasized as a guarantee for a successful career path.

### **3.4. Information literacy in the context of lifelong learning**

Information literacy is essential for the successful operation in a civic society. Many studies have been devoted to analysis of interrelation between information literacy and lifelong learning, focusing on issues such as adult and self-directed learning, which is directly related to the development of information literacy skills. Information literacy is essential for the successful operation in a civic society.

Higher education is changing to serve the needs of the 21<sup>st</sup> century called the information age where building of the knowledge society is taking place. The necessity to develop effective methods of teaching and learning to respond to students as future lifelong learners' needs emerging in this perspective calls for rethinking education paradigm within university education.

In Europe, active information seeking is identified as an essential component of democratic participation. As stated in the UNESCO's World Report "Towards Knowledge Societies" (2005):

*"...information without transformation is only raw data. The use of information requires a mastery of cognitive skills, including critical thinking, and this in turn depends upon the capacity to locate, evaluate and then use information."*

Information Literacy skills are part of a bigger constellation of adult skills and underpin some of the Millennium Development Goals (MDGs, 2003). Moreover, the use of ICT in any life-context will not be efficient without mastering information literacy skills.

Information literacy skills are necessary for people to be effective lifelong learners and to contribute in the knowledge society. For this reason information literacy was endorsed by UNESCO's Information for All Programme (IFAP) as a basic human right. Information literacy is also seen as a crucial tool in developing health and wellbeing for all people. Grant (2002) defined health information literacy in this context as "the capacity of an individual to obtain, interpret, and understand basic health information and services and the competence to use such information and services in ways which are *"health enhancing"*. This competence includes the ability to distinguish between information from credible sources such as World Health Organization (WHO), and information from those who manufacture and market claims for products and medical supplies.

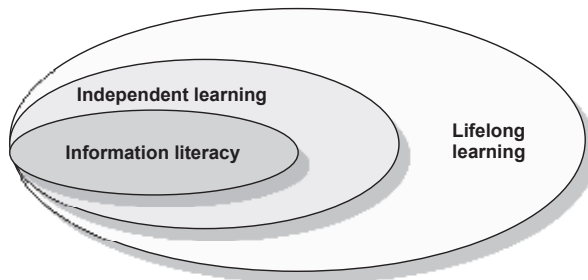
Information literacy is closely linked to the concept of lifelong learning in undertaking day to day education practices, problem solving processes or acquiring more knowledge. Participation in lifelong learning is a fundamental mission of higher education institutions (Bundy, 1998, Candy, 2003; Bruce, 2003). As early as 1999 Lithuanian Higher Education White Paper set the tasks for the modern university: alongside its direct functions to promote lifelong learning and develop lifelong learning opportunities. Universities could successfully develop lifelong learning infrastructure, but at the moment universities are tuned to the continuing education. Candy (2003, p.6) states:

*“Lifelong learning concept from being purely rhetorical element in educational theory and practice on the outskirts of becoming a major organizational principle of education policy-makers and practitioners around the world”.* The author presents inevitability of two continuous learning mainstreams:

1. people need to reach the required information;
2. they must be able to judge the quality of information.

Information literacy has become a relevant adult education (learning) perspective. Many national and international documents focus attention on students’ empowerment and readiness to be active citizens. According to modern educators’ point of view (Bundy, 1998; Breivik, 1998; Candy, 2003; Bruce, 2003) there is a close link between university strategic goals of lifelong learning provisions and the application of information literacy in university studies. Information literacy and information skills training is thought as to be one of the key strategies for preparing students for employment and lifelong learning.

In this light information literacy is viewed as an integral component of independent learning and the latter respectively, an integral component of lifelong learning (see Figure 7). The imperative of becoming lifelong learners is highlighted as one of the necessary preconditions for the country’s economic independence and quality of life.



**Figure 7. Information literacy and lifelong learning interaction**

To respond effectively and efficiently to changes in the social environment people need to have a good base of knowledge and skills, there-



fore, they need to master technology to link with the existing knowledge and practical use of it.

The program documents (Action Learning for Lifelong Professional Development, 2004) emphasize essential advantages of the use of computers and IT training for learning purposes:

- An extensive level of information tied to the flexibility of learning experiences in the result set.
- Modern advances allow the material posted on the Web to reach a variety of forms and use it for different learning styles.
- Learners may come into contact with other learners and teachers not necessarily by the schedule announced sessions (asynchronous communication).
- They can leave messages, their thoughts or questions to the discussion board, or e-mail.
- Materials developed for a specific course may be supplemented by other sources of the Web.
- Students can get immediate response, access to the course data.

The main mission statement of the Lifelong Learning Strategy developed by the Ministry of Education and Science of Lithuania emphasizes integral and comprehensive lifelong learning system, offering “a variety of opportunities for professional, social and personal education for all working age individuals and vocational training for youth in accordance with the European standards” (Lifelong Learning Strategy, 2003, 4p.). As one of the main incentives for lifelong learning mentioned in this document are changes and development in the European and global context. The lifelong learner is described as having the following characteristics:

- Knowledge of the most important resources available in at least one field of study
- Skills in at least one field of study to formulate research questions
- Ability to identify, manage, and use information in different contexts
- Ability to extract information using a variety of tools
  - Ability to decode information presented in different forms: writing, statistics, in the form of graphs, tables, charts
- Critically evaluate information.

The document stresses such lifelong learner's characteristics as abilities of information management and the use of technological tools which can open broader possibilities for the citizens.

An Australian researcher Bundy (1998) metaphorically describes the importance of information literacy "...The landscape on which we stood is transforming and we are forced to create a new basis called "information literacy". In Australia understanding of information literacy and its limits have been widely discussed. Grounding on the constructivist perspective the country's educators consider information literacy as an essential, lifelong learning element composed of separate parts. Information literacy is viewed as an *essential component of lifelong learning* and the most relevant strategy in training students for life. The concept of information literacy is considered as a synonym to "learning to learn" (Australian School Library Association). Some researchers describe information literacy skills as communication and teamwork abilities. Yet, from a holistic viewpoint information literacy should be approached as an integral construct made up of a number of components; furthermore, it is referred to as a *lifelong learning competency* that should be fostered through life (ANZIL, 2004, 1p.).

### 3.5. Information literacy and media literacy

As stated in the UNESCO's World Report "Towards Knowledge Societies" (UNESCO, 2005), information without transformation is only raw data. The use of information requires a mastery of cognitive skills, including critical thinking, and this in turn depends upon the capacity to locate, evaluate and use information in a respectful manner.

Literacy has traditionally been described as the ability to read and write, with arithmetical literacy often added to the mix. Today the concept of literacy is recognized to be a plural and dynamic concept.

In 2007, UNESCO initiated the development of a set of Information Literacy (IL) indicators which would allow measuring information literacy (skills) at national and individual levels and knowing the extent to which citizens are able to participate in knowledge societies.

Information Literacy and Media Literacy are traditionally seen as separate fields of research and human capacity. The term *media literacy* is generally conceptualized as the knowledge and skills individuals need to analyze, evaluate, or produce media messages. UNESCO's strategy envisages the blend of these two fields and combines into a set of competencies (knowledge, skills and attitude) underlying the rationale of life and work today. Media and Information Literacy (MIL) considers all forms of media and other information providers such as libraries, archives, museums and Internet irrespective of technologies used. In 2011, UNESCO decided to apply a joint approach including media literacy in already ongoing IL indicators development process. Information literacy emphasizes the importance of access to information and the evaluation and use of such information. While for some time information literacy was considered to focus on peer-reviewed and evaluated publications, this is no longer true. The scope of information literacy has been broadened to incorporate all types of information and content. "Media literacy emphasizes the ability to understand, evaluate and use media as a leading purveyor and processor, if not producer, of information " (UNESCO, 2005, p. 11). As these notions are interdependent and interrelated UNESCO considers information literacy and media literacy together as Information Literacy–Media Literacy or Media Information Literacy (MIL).

"Media and information literacy (MIL) endows individuals with knowledge about the functions of the media and information systems, the conditions under which these functions can be performed, and the ways citizens can both evaluate the quality of content and contribute to it" ((UNESCO, 2005, p.12.). According to UNESCO's Media and Information Literacy Curriculum for Teachers, multiple and related literacies are included in the concept of MIL (Computer Literacy, Digital Literacy, Freedom of Expression - Freedom of Information Literacy, Information Literacy, Internet Literacy, Library Literacy, Media Literacy, News Literacy ) (see Figure 8).

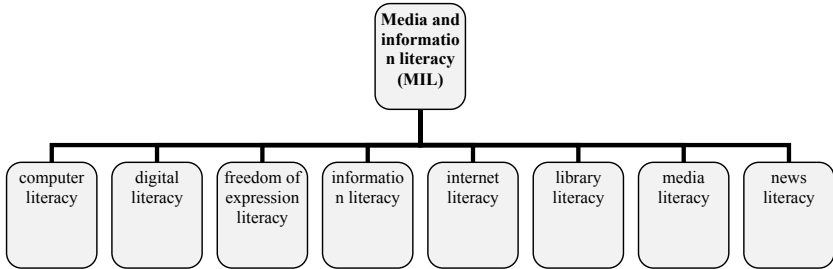


Figure 8. The framework of MIL

The UNESCO document is based on many worldwide studies, conferences and workshops over the past thirty years in an attempt to define the scope of the notion of MIL. The following definitions and descriptions have been used to define Media and Information Literacy:

- Media includes mass media of all kinds, interactive media (e.g., the Internet), different forms of advertising and informal media, such as Twitter, blogs, etc.
- Media literacy is extremely difficult to define and usually includes all stages of the lifecycle of communications using these forms of media.
- Information literacy includes the competencies to be effective in all stages of the lifecycle of documents of all kinds; the capacity to understand the ethical implications of these documents; and the ability to behave in an ethical way throughout the stages.
- Digital literacy, which is an essential and complementary capacity to media and information literacy, refers to the abilities to use ICT effectively and efficiently throughout the communications life-cycle ((UNESCO, 2005, p. 13).

Three main categories of MIL indicators were suggested in the above mentioned study to measure individual level of MIL.

The MIL entails being able to:

- 1) access media and information
- 2) evaluate/understand media and information in a variety of contexts.
- 3) use media and information in a variety of contexts.

UNESCO has prepared the document with the view to the main principles this organization operates on: equality, cultural diversity, freedom of expression. Therefore, it is relevant to all world communities and as regards the key ideas, they should be applied worldwide in any segment of educational or social setting.

## CHAPTER 4

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# SOCIAL MEDIA IN FORMAL EDUCATION

Web 2.0 era and modern technologies have provided learners with diverse engaging tools for building knowledge in the ways and at the times that are best suited for individual needs. One strikingly interesting yet insufficiently researched phenomenon is the opportunity to connect with people sharing similar interests and needs as well as the phenomenon's impact on informal learning, formal education systems, knowledge creation processes, changing human thinking and learning habits. Institutions of formal education face the challenge brought by the informal learning processes and outcomes taking place through social networking and social media: the institutions cannot ignore the impact of the processes on individual learners, learning ways and habits, learner preferences if they seek to be relevant in Web 2.0 era and in the "network society" as defined by Castells (2000). Social networking and social media play a huge role in learning; therefore, today there is no longer any point in focusing solely on their advantages and disadvantages as regards learning since social networking and social media have become an inseparable part of learning process (though the quality of what is learnt in social media is a highly contested issue among researchers); rather it is necessary to research in depth the learning process from various perspectives – educational, psychological, sociological, technological – and specifically the concerns of formal education institutions and the ways they can integrate the learning occurring in social networks and social media into formal education processes.

#### **4.1. Changes in education**

Information and communications technologies and the tendencies of higher education institutions to implement networked studies as their response to the rapidly rising importance for adult learners of the learning taking place in social networks and social media is a hotly debated issue among educationalists, researchers, practitioners, ICT professionals. At first glance one might get the impression that contemporary society and the field of education are enjoying the best ever era in terms of rapidly-developing innovations; however, it is essential for all concerned with education and learning to be aware of ample controversial view-

points and insufficient high-quality research of the phenomena of networked life. In his fundamental work, *Postmodern Condition*, Lyotard investigated the condition of knowledge in modern societies and pointed out that knowledge cannot be reduced neither to science nor learning. He defined scientific knowledge as discourse type (1984, p.4) and envisioned the rising impact the technological transformations were going to have on knowledge and its functions – research and the transmission of the acquired learning (p. 4). Technological innovations, globalisation and what some researchers refer to as “commoditization of knowledge” (Mason & Rennie, 2008, p. 145) substantially change traditional brick and mortar formal education: education as a system and a process, its values and visions. The essential element here is that in Web 2.0 era, the learner, faced with huge information flows, has much more power over his own decisions. Walters & Kop (2009) maintain that “universities in the contemporary world should still play a central role for intellectual inquiry and critique, which are sometimes lacking in online network discussions. They could be the central “hub” where different forms of knowledge come together and are communicated.” (Walters & Kop, 2009, cited in Kop 2010).

Kop (2010) points out significant directions for educational institutions to take: “it is up to tutors, teachers and lecturers of the future to realise that the functions of the university might still be the same, in particular the validation and certification of knowledge, but that the manner in which they engage with their students can no longer remain the same. If they want to be meaningful to students of the future, and intend to play a role in the critical engagement in online communications of their learners to ensure it reaches the level of a dialogue rather than of a conversation, they will have to engage within the online environment that is currently unfolding and on which their students spend most of their time, even sometimes during their face-to-face lectures.” (Kop, 2010, p. 275).

#### **4.2. Education in network society**

Castells’ concept of “network society” accounts for a lot of aspects of what is happening in 21<sup>st</sup> century education and ways of learning. Rennie



& Mason (2008) devote considerable space to the discussion of social networking as an educational tool viewing it from various angles, also including discussion of the phenomenon's limitations and criticisms. These authors point out that the implications of social interaction in networks as regards education are significant in terms of user-generated content and its impact on learning. Rennie & Mason (2008) provide a very interesting insight claiming that another way of seeing user-generated content is that of network. They cite Rudd, Sutch, and Facer (2006) who say that "Castells, for example, argues that the network is now the fundamental underpinning structure of social organisation – that is in and through networks – both real and virtual – that life is lived in the 21st century. [...] This concept of the "network society" calls into question what it means to be "educated today – what new skills, what new ways of working and learning, what new knowledge and skills will be required to operate in and through these networks? It requires us to ask whether our current education system, premised not upon networks but upon individualised acquisition of content and skills, is likely to support the development of the competencies needed to flourish in such environments." (Rudd, Sutch, & Facer, 2006, p. 4 cited in Rennie & Mason, 2008, p. 6)

Social networks and their implications for learning in the 21<sup>st</sup> century have raised numerous issues for formal education institutions. The debates regarding these issues often revolve around "the commoditization of knowledge", "the student as customer" approach to learning", "mass amateurization" (Rennie & Mason, 2008, p. 145). Despite ample criticisms and pessimistic viewpoints in the field, which provide a balance to often too-enthusiastic, under-researched claims regarding the specificities of the learning that occurs through social networking and media, formal education institutions inevitably have to deal with the phenomena if they want to remain relevant for learners today. Mason & Rennie (2008) point out three areas of concerns for educational institutions pertaining to: (i) learning management systems or virtual environments; (ii) staff development; and (iii) assessment processes (Mason & Rennie, 2008, p. 148). Assessment of informal knowledge acquired through learning occurring in social networks and social media is probably the most significant venue where formal education institutions can realise their potential

in full. In relation to online learning and e-learning, Bach, Haynes, & Lewis Smith (2007) claim: “While technological change and the online environment is one of the drivers of change in higher education, it is also one of the responses to other changes. It offers new opportunities for adapting learning and teaching to the mass higher education environment. It offers opportunities to improve the quality of the learner’s experience.” (Bach, Haynes, & Smith, 2007, p. 31).

Open access to information resources is naturally seen as a valuable tool for learning; however, educationalists often stress the necessity to develop information literacy, media literacy, critical thinking skills as regards informal learning occurring in social networks and media. In case of new media (which are all social in their character), the concept of Multimodal Literacy is of relevance. Silverton PS Catalyst Team (2008) in their project distinguishes the following sub-types of multimodal literacy: print literacy, visual literacy, information literacy, media literacy, and graphic literacy. As Duoblienè (2011) maintains, one of the issues investigated by education researchers nowadays has arisen due to “[...] the freedom to accumulate knowledge and experience by combining them into a whole [...]” (2011, p. 96). Thus it is important to understand what guides the learner in selection of information and sources for learning, how the learner determines the reliability and objectivity of information. Therefore, it is necessary to research in depth the ways the learner copes with information flows. Duoblienè (2011) also points out the fact that the understanding of what is a source of information, how information is perceived, and the ways of thinking change. Currently, some researchers are involved in a discussion regarding “the specific presence” in the network and in-depth analysis of what in fact people do in networks (Kluitenberg, 2000). As Kluitenberg (2000) maintains, the networked media is often defined as a social space where active relationships are being initiated and maintained, and the net is defined as “infosphere” that is seen by many as:

“[...] a transitory phase of development that will soon be replaced by professional standards of quality, entertainment, information, media-professionalism, and above all respect for the audience.” (Kluitenberg, 2000).

But Kluitenberg himself envisions the future differently:

“[...] I am convinced that the net will not evolve into the ultimate entertainment and information medium. Instead it seems more likely that the seemingly unstructured mess of random transmissions will prevail.” (Kluitenberg, 2000)

Quite interesting viewpoint that is still relevant today is posited by Dillenbourg (2000) claiming that virtual learning environments are not formally required to provide only well-structured informational spaces; however, this author predicted that this criterion would gain relevance: content management is one of the key issues for teachers working in virtual environments. According to Dillenbourg (2000), researchers have to engage in in-depth investigations of functional structuring of information and its delivery as well as the ways how information has to be used in learning/teaching and communicating in networked environments; for instance, it is necessary to focus on the use of information in learning/teaching, the problem of “multi-authorship”, the importance of determining authorship, information management (structuring and meta-information), information sharing (through connections with other learning environments, shared formats of description of information sources, etc.). But Dillenbourg (2000) agrees that access to information is a new possibility needing deeper research.

There is a number of theories and approaches developed by researchers that offer a sound grounding for accounting for, investigating, and developing insights into the field of informal learning occurring in social networks and social media, as well as the challenges faced by formal education institutions and their ways of tackling the need to integrate learning occurring in social networks and social media that arises due to modern learner’s readiness, preferences, way of life, and new, naturally developing, modes of knowledge creation. The premises of social constructivism, the theory of connectivism developed by Siemens (2004, 2006, 2011, Downes, 2006) and also the Theme-Centred Approach developed by Ruth Cohn are some of the viewpoints that seem to provide well-substantiated insights into the phenomenon of learning in networked space (most publications by Ruth Cohn are in German, but a very good

presentation of the approach is offered by Hornecker (2001)). As Kop (2010) maintains:

“Current developments in communication technology have instigated a debate on a potential new learning theory, named “Connectivism”, that some observers see as the logical development in learning theory development to encompass the informal learning people do on the Internet. Through interaction with nodes on online networks, people can access information and communicate with others on a global scale. “Connectivism” is contested as it might only be a further development from earlier theories. Even though in theoretical terms its existence might not be justified, in a pedagogical sense the need to (re)-consider the learning process has become apparent as new technologies open up new possibilities for active engagement by the learner in non-formal and informal learning through the use of emerging technologies, which could strengthen student learning.” (Kop, 2010, p. 102)

Siemens (2011) points out that the degree of learner control of learning processes and meeting learning objectives are the aspects that distinguish informal learning from formal education:

“Educators have traditionally served as intermediaries, pointing students to specific texts and articles. This role has been altered with the development of the internet and the World Wide Web. The personal agency the ability for individuals to “intentionally influence one’s functioning and life circumstances” (Bandura, 2002: 270) of a student has also been altered. Individuals have access to a wealth of information through advanced search tools and databases. Theoretically, greater quantities of information and more effective tools for access have improved the ability for individuals to “control, transform, and create environments of increasing complexity” (Bandura 2002: 272). Agency is not individualistic; collective social systems influence agency: “personal agency and social structure operate interdependently rather than as disembodied entities. Personal agency operates within a broad network of sociostructural influences. In these agentic

transactions, people are producers as well as products of social systems” (Bandura 2002: 278).” (Siemens, 2011, p. 6)

Kop (2010) also believes that the issues of self-direction, autonomy and control are the ones that are important in the context of learning environments as regards the relationships between institutions and personalisation of learning:

“Issues of learner self-direction, learner autonomy and learner control have shown to be of importance. As the online learning environment is positioned between the institution and the Web, depending on the level of personalisation and the level of informal learning, different levels of self-direction and different roles by the tutor are likely.” (Kop, 2010, p.104)

According to Siemens (2004), the three most common learning theories in educational context (behaviorism, cognitivism, and constructivism) do not meet contemporary demands of education since they were created when technology did not impact our life so significantly. The researcher claims that

“Learning needs and theories that describe learning principles and processes should be reflective of underlying social environments.” (Siemens, 2004, p.1)

### 4.3. Modern trends in learning

Therefore, Siemens distinguishes what he calls “significant trends in learning” implying that: (i) learners acquire experience in multiple, sometimes even unrelated, fields in their lifetime; (ii) informal learning occurring in various ways gains in importance; (iii) learning and work are interrelated; (iv) technology use influences and changes our thinking; (v) both an individual and an organization learn; (vi) many processes nowadays are impacted by technology; and (vii) know-where is added to know-how and know-what (2004, p.2). In the circumstances, according to Siemens, it does not suffice only to modify the existing theories – an innovative, alternative approach has to be offered for consideration (2004, p.4). Thus, Siemens elaborates on the connectivism theory and states,

“Connectivism is the integration of principles explored by chaos, network, and complexity and self-organization theories. Learning is a process that occurs within nebulous environments of shifting core elements – not entirely under the control of the individual. Learning (defined as actionable knowledge) can reside outside of ourselves (within an organization or a database), is focused on connecting specialized information sets, and the connections that enable us to learn more are more important than our current state of knowing” (2004, p. 6).

Another interesting angle is offered by the viewpoints regarding the processes of social media (SM) adoption in adult education. Nowadays adult education institutions are faced with the challenge of technology adoption. This perspective is extensively covered by Straub (2009). Straub in his study investigates computing adoption processes from the perspectives of several theories (Roger’s innovation diffusion theory, the Concerns-Based Adoption Model, the Technology Acceptance Model, and the United Theory of Acceptance and Use of Technology) and claims that these models are rooted in social cognitive theory. Straub concludes that “First, technology adoption is a complex, inherently social, developmental process. Secondly, individuals construct unique (but malleable) perceptions of technology that influence the adoption process. Lastly, successfully facilitating technology adoption needs to address cognitive, emotional, and contextual concerns.” (2009, p. 22).

Toole et al. (2010) in their paper also discuss different types of barriers that have to be overcome in SM adoption processes in adult education. The authors also focus on benefits of using Web 2.0 in adult education and future prospects.

As regards communication among learners and educators, Kop (2010) in her research focuses on specific aspects of SM use in adult learning and investigates effective use of social media in adult learning, the learner’s level of control in comparison to the tutor and the institution, facilitation of communication among learners and educators, and other related issues. New technologies are seen as fostering communication, engagement and self-direction while, importantly, adult educators are referred to as “trusted ‘human filters’ of information”.

Social networking (SN) for educational purposes seems to be a specifically problematic issue for researchers, educators, and learners. The use of social networks has been discussed in several works covering different aspects of using social networks (SNs) in education that are included in ISTUS blog archive as sources providing useful insights (Rainie, Lenhart, and Smith, 2012) investigate social networking climate; IEEE Learning Technology Newsletter (April 2012) devoted an entire special theme section on SNs and social computing-enhanced learning; SNs are also extensively investigated in Scott, Carrington (2011) who provide an exhaustive and extremely useful guide for education researchers.

Finally, media and information literacy is another important issue that has to be taken into consideration in any discussion of SM use for educational purposes (Baran, Davis (2009); Duoblienė (2011); Vaičiūnienė (2007)). Following information published in UNESCO site, “Information Literacy and Media Literacy are traditionally seen as separate and distinct fields. UNESCO’s strategy brings together these two fields as a combined set of competencies (knowledge, skills and attitude) necessary for life and work today. Media and information literacy (MIL) considers all forms of media and other information providers such as libraries, archives, museums and Internet irrespective of technologies used.” Lau (2010) focuses on information literacy and media literacy relationships and presents MIL competencies as encompassing knowledge, skills, and attitudes, and specifies core skills (access; evaluation/understanding and use) and subsidiary skills (identify need/ express/ search/ locate; analyse/ induction/ deduction (understand)/ process; and apply/ learn/ ethics/ communicate/ reproduce/ produce). These sources provide reasonable guidelines for establishing key characteristics of media and information literacy seen as a combined set. In addition, valuable insights for educators and learners can be gained from studies of new media (Lievrouw, Livingstone (2010); Lievrouw, Livingstone (2002); Joinson, McKenna, Postmos, Reips (2007); Weber (2006)).

## CHAPTER 5

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# EMPIRICAL RESEARCH ON SOCIAL MEDIA



The research is devoted to analyze the use of social media in adult education and contains two stages: 1) pilot research and 2) international qualitative research.

### **5.1. Pilot research findings**

The purpose of the pilot research was to gain initial insights into the role of social networking and social media in adult education and their impact on adult students as regards their educational needs and specific personal situations within the frame of the learning partnership project. The aim of the research was to define specific aspects of the uptake of technologies and applications by MRU students; thus, the objectives of the research were (i) to review literature pertaining to the field of social media in adult education context and (ii) to analyze the respondents' insights as regards learning/teaching practices, resources, and facilities that affect their learning in relation to social networking and media use (taking into consideration both personal and educational perspectives). The pilot research adopted qualitative research approach: 5 semi-structured interviews were conducted to establish the basic concepts, understandings and impacts as seen from the respondents directly involved in networked learning. The pilot research had its limitations in the sense that it was focused only on the attitudes of MRU students. However, from the practical perspective, this research has acted as a starting point for further investigation encompassing findings of all partners of the project. In addition, it has provided insights into potential venues for further investigation as regards the existing situation, needs, tendencies, different attitudes and research issues important in the investigated context and developmental tendencies of education in contemporary society.

#### **5.1.1. Research methodology**

The research adopts qualitative research approach. The following categories have been singled out in the interviews: (i) personal insights about teaching/learning practices in this higher education institution in relation to the use of social media (SM); (ii) the personal perceptions of

SM both from the perspective of personal use and the perspective of educational use; (iii) the reasons and specific examples of SM use; (iv) the pros and cons of SM impact on work and learning/ teaching; (iv) type of SM – public or institutional – the respondents consider to be potentially more efficient in their educational context and who should be responsible for initiating activities in SM for education; (v) knowledge and skills that the respondents consider to be relevant in current learning process; (vi) the feedback that they give about the courses and the possibility of using SM for providing feedback; (vii) the capacities of teaching staff, and (viii) the expected changes regarding the use of SM in teaching/learning.

### 5.1.2. Results and findings

*Teaching/learning practices.* In general, the support for professional and personal development received from institution has been assessed by the respondents as good and even excellent. Various resources and facilities are used for professional and personal development with the exception of one interviewee who does not use textbooks, only interactive and online sources. In addition, all interviewees (except one respondent) think that all resources are integrated systematically by the institution.

*SM definitions.* In comparison to the working definition of SM provided above, the interviewees defined SM as: (i) Internet and telecommunication technologies that are used by individuals, groups and organizations for communication; (ii) software for communication and cooperation; (iii) Internet sites for communication and information sharing; (iv) social sites in Internet; and (v) information that is provided by people who are not necessarily experts of relevant fields and that is available online (e.g., in Wikipedia). We can infer from these ideas that students mainly correlate SM with online communication tools and their perception of what SM are is very broad and unspecified. This is also obvious from the reasons and specific examples of SM use that the respondents provide.

*The reasons for using SM.* SM are used by the respondents in this research entirely for communication purposes. Normally, this implies communication with friends (further not specified) or communica-

tion with group mates for learning on one's own initiative. Only one respondent claimed that the reasons for using SM are communication with teachers and communication with group mates for learning directed by institution.

*Examples of SM use.* When asked to describe particular examples of SM use for learning, the respondents mentioned communication (with friends or any communication); cooperation, reading articles shared through SM; information search and sharing have been considered in the second place. Besides, SM are used for sharing one's ideas, opinion, experience. In addition, SM are a way of spending one's pastime when feeling too tired for any mentally-demanding activity.

*SM impact on work and learning.* This question led to gaining insights into perceived pros and cons of SM use for education or work. The perceived advantages are: (i) SM are a place for communication with friends and acquaintances that one cannot meet face-to-face or that one would not otherwise communicate with (because they live abroad or in another city, they were one's high school mates, classmates or ex-group mates at university) about their hobbies, situations and experiences; (ii) it would be impossible to collect all the information that is available in SM on your own; (iii) one can find out a lot about the people one knows, about activities of relevant institutions, news, etc. One stays up-to-date and instantly communicates with people; (iv) the respondents find it easier to locate the required information in a short time, to communicate with group-mates and colleagues; and (iv) it is easier to maintain at least certain kind of relations with a bigger number of people. The negative effects of SM that have been indicated are the following: (i) SM are time-consuming and tiresome; (ii) a negative habit of constant urge to plunge in Facebook starts actually forming; (iii) the time spent in Facebook could be better used for studying, work, sports, etc.; (iv) people do not know how to communicate in reality because they do not care about each other: everything can be found in Facebook; (v) SM take a lot of one's time and thus reduce the efficiency of studies. In addition, respondents believe that SM should be used in learning/teaching though the efficiency, purposes, and methods of SM use for teaching/learning still raise a lot of questions.

*Public or private/institutional SNS and SM used for teaching/learning.* Two respondents believe that both public and private SNS and SM should be used for learning, and three respondents prefer only public SNS and SM.

*Initiating activities in SM and SNS.* One more point for consideration has been the source of initiative for starting activities in SNS and SM for teaching/learning: three respondents claim that both institution and learners should initiate the activities, but two interviewees think that, in educational context and for educational purposes, teachers should the activities.

*Knowledge and skills needed in current and ongoing learning process.* Analytical thinking skills and information and media literacy skills have been rated as most important. Secondly, social skills were mentioned. In addition to these, creativity, specific knowledge, collaborative skills, and computer skills were pointed out.

*The skills supported by a study programme.* These skills, according to the interviewees, include collaborative skills, creativity, social skills, specific knowledge, and computer skills.

*Skills and qualities developed by SM in teaching/learning.* The rating of the skills has been different when focusing on SM impact on individual skills: collaborative skills, computer skills, social skills, specific knowledge, and creativity. Though collaborative skills are considered to be the most important ones (just like in the rating of the skills supported by a study programme), computer skills are placed in the second position in the order of importance under this heading.

*Feedback about the courses, feedback data collection, and use of SM for providing feedback.* Different have been provided regarding institutional initiative of getting feedback on the courses and teaching practices from students. When asked for feedback, the respondents mentioned traditional on-line questionnaires, assessment scales, and open discussions. When asked to describe exactly what feedback they provided, only one respondent pointed out that, depending on subject and teaching method, the assessment ranged from good to satisfactory. As regards providing feedback in SM and whether it would differ from feedback collected in traditional ways, one interviewee said that the feedback in SM should be

only positive for the sake of public relations. Other interviewees pointed out that SM provide a space for both positive and negative feedback. According to one of the interviewees, SM provide a perfect platform for one's suggestions and observations not expressed so far in traditional ways. One interviewee claimed that the feedback in SM would not differ from traditional ways of providing feedback.

*Capacities of educational staff.* According to the respondents, all teachers know what SM are, some of them are interested in SM, and use them a lot. Besides, the university offers qualification courses and other events for teachers where they can develop new media skills.

*Expected changes regarding the use of SM in teaching/learning.* The respondents ideas stemmed from considerations about (i) creation of a specific SM type for discussion and accumulation of information for those interested in the use of SM for educational purposes; (ii) a possibility to participate in inner (institutional) SM that would involve qualified people from university who could answer the questions important for students and would maintain communication with students; and (iii) students becoming more active and conscious in expressing their viewpoint as regards learning/teaching based on SM more often, and educational staff should be more responsive.

## 5.2. International qualitative study

The research has been initiated and carried out within the framework of Grundtvig multilateral partnership project "Institutional Strategies Targeting the Uptake of Social Networking in Adult Education (ISTUS)" The project involved educational institutions around Europe engaged and interested in the use of social media in adult education.

Institutions participating in the project:

- AKAD Wissenschaftliche Hochschule Lahr (WHL), Germany
- International Correspondence Schools Limited (ICS), UK
- MYKOLO ROMERIO UNIVERSITETAS (MRU), Lithuania
- Comune di Sant'Angelo in Vado (MSAV), Italy
- NTI Nederlands Taleninstituut BV (NTI), Netherlands

- Scuola Universitaria Professionale della Svizzera Italiana (SUPSI), Switzerland
  - Tampere University of Applied Sciences (TAMK), Finland
- Participants of the project shared interest and practice of social media in adult education.

### 5.2.1. Research methodology

The project team intended to apply mixed methods of research quantitative and qualitative and produced structured questionnaires but after a deep consideration took a decision to apply qualitative research using the open-ended questions for semi-structured interviews. The reasons were manifold including the nature and the aim of the research itself, limited resources and limited numbers of research participants among lecturers and administrators. The research strategies of qualitative semi-structured interviews were adopted because the project team aimed at researching the multiple phenomenon of the use of social media in adult education, as a phenomenon of our living world. According to Heidegger a phenomenon is what arises in our consciousness, our perception. He raised a question of the existence of any type of so called objective knowledge beyond the limits of human perception. (Heidegger, 1972) According to the author we are thrown into the world (*Dasein*), so we are always in a kind of relationship with the surrounding world. Thus we cannot observe the world objectively as we are in a constant permanent relationship with it. Heidegger (1972) suggested that ultimate abstract structures cannot be reached because our observations are always influenced by our subjectivity. The only and the best we can do - interpret. Phenomenology here is perceived not only a pure description but also as an interpretation of lived experiences. Again Heidegger is the author who merged the two philosophical thoughts phenomenology and hermeneutics. The beginning of hermeneutics was attempts to interpret texts, however, Heidegger applied it in a broader philosophical context. Hermeneutics provides important theoretical insights for interpretative phenomenology as the researcher examines the essence of the phenomenon by interpreting the manifestation of the phenomenon.

Interpretation is one of the milestones of the phenomenological research. Another essential theoretical principle in the interpretative phenomenology is ideography. It reveals the details of a separate case which lead to the deep analysis of a particular experience revealing all the subtle details (Smith, Flower, Larkin, 2009). What is more, the analysis should be carried out precisely and systematically. Another important principle related to ideography is the interpretative phenomenological interest in how the particular phenomenon is experienced by particular people in particular contexts which means that cases of the phenomenon analysis are selected purposefully.

The research is based on qualitative semi-structured interviews as an instrument to collect the empirical data. According to Ricoeur (2000) communication is essential in human existence as communication is a tool which enables to share the meaning of lived experience. The experience remains personal but due to communication the meaning of the experience becomes public, thus communication overcomes the untransferable nature of the lived experience. The author reveals the power and importance of communication in transferring the meaning of the lived experience to others. This way qualitative interview gains the power to obtain the empirical data of the lived experience of the research participants. What is more, the experience can be analyzed. According to Ricoeur (2000) the aim of the structural analysis is to perform segmentation of the collected data (horizontal aspect) and then to define the level of the integration of separate parts in the whole (hierarchical aspect).

### 5.2.2. Data collection and analysis procedures

The research was based on Grundtvig multilateral partnership project “Institutional Strategies Targeting the Uptake of Social Networking in Adult Education (ISTUS)”. It took place from 2011 November to 2013 February. The research fell into three main stages. First, the project team carried out literature analysis capturing that wider research of social media use in adult education has been important. Social media appeared to be multifaceted media opening new perspectives in education. The literature review included examples, lessons learned, risks, attitudes and

theories behind the use of social media. Then the project team considered broader research on social media integration in adult education on European level and qualitative research approach was adopted for the research. The project group designed and organized semi-structured interviews as the way of collecting empirical research data. Three research participant groups were identified: lecturers, students and administrators to broader represent the phenomenon of the use of social media in adult education. Project team agreed to conduct 3-4 in-depth interviews with lecturers, students and administrators of the institutions of the participating countries. Interviews were conducted in Germany, Switzerland, Italy, Finland, Lithuania, The Netherlands and The UK at different educational institutions which include mostly universities (5), 3 VET schools, 1 university of third age and 1 private distance learning institution. The institutions provide study programs ranging from undergraduate to PhD where learning takes place onsite or in a mixed mode. 25 interviews with administrators, 25 interviews with teachers and 26 interviews with students were conducted in the course of the survey. The interviews were carried out in the native languages of the research participants and then the data was translated into English.

The method of criterion-based sampling was applied. Respondents have been selected according to the following criteria: nature of institution (specialists who work or students who study in the institutions of adult education) and experience using social media (administrators and lecturers at least three years of job experience using social media). Time for the interview was personally appointed having discussed it with each participant of the interview. At the beginning of the interview the aim of the research was presented to the interviewees and their active participation, objectivity and sincerity were welcomed during the interviews. Permission to record the interview was received from the participants ensuring the confidentiality of the data.

During the interviews open questions were related to the explicit nature of the use of social media either for work or for studies. The following aspects have been addressed:

- Background of the institution
- Social media currently adopted within institution



- Definition of social media and its use (personal and professional)
- Impact of social media on work and learning environments
- Attitudes towards Social media in Education (culture, future perspectives, values, perceived attitudes of students, teachers and administrators)
- Institutional strategy and support to using social media in teaching and learning

The final stage was the analysis of interview results which was based on the method of content analysis:

- identification of main aspects reflected by phrases and parts of the sentences; identification of categories based on key words;
- identification of notional elements: segmentation of content into categories by specifying their elements;
- grouping of notional elements into sub-categories;
- interpretation of the content data.

### 5.2.3. Findings

The analysis of the interviews was used to distinguish the meaning units in the interview material of the research participants. Then the meaning units were condensed into sub-themes, which later were linked to form the main themes (categories) and broad dimensions. All the steps of the process defining dimensions are presented below in the tables. The tables are organized according to the three groups of research participants: lecturers, students and administrators, reflecting social media application in teaching/learning experience for each research participant group accordingly. Four common dimensions for all the three groups of participants have been distinguished: social media application, perceived advantages, perceived problems and change manifestations.

#### 5.2.3.1. Lecturer experience

Speaking about the first dimension – social media application, lecturer use of social media is presented in Table 4. It reveals that lecturers perceive two purposes of their social media use:

- Communication
- Sharing information

**Table 4.** Social media application (lecturer use of social media)

| Meaning Unit   | Abstracted unit   | Sub-theme 1                 | Sub-theme 2                  | Theme                        |
|--|---|-----------------------------|------------------------------|------------------------------|
| Communication with students and other parallel organizations   | Communication with students and organizations                           | Communication with students | Communication purposes       | Lecturer use of social media |
| Announcements to students, answer students questions   | Announcements to students, answer questions                             |                             |                              |                              |
| Communicate with friends, stay updated on friends' and colleagues' news and events                       | Communicate with friends and colleagues                                 | Communication with friends  |                              |                              |
| To share material, social media is the best way for me to store visual notes online                      | To share material, to store visual notes                                | Sharing material            | Sharing information purposes |                              |
| In my teaching process I usually use Facebook groups to communicate and share materials with my students | use Facebook groups to communicate and share materials with my students |                             |                              |                              |

Lecturers indicate that social media is a means for communication with students, institutions, colleagues and friends “Communication with students and organizations with friends and colleagues” The other purpose is sharing information, which includes storing and sharing material with students “to store visual notes, share materials with my students”.

**Table 5.** Perceived advantages (lecturers)

| Meaning Unit  | Abstracted unit                                | Sub-theme 1                       | Sub-theme 2                       | Theme                                |
|---|--|-----------------------------------|-----------------------------------|--------------------------------------|
| Social media such as Wikipedia provides useful information                    | Social media provides useful information       | Useful information                | Promotion of information exchange | Perceived advantages of social media |
| Social network is useful to be aware of others' activities                    | It is useful to be aware of others' activities | Awareness of ideas and activities |                                   |                                      |
| Getting up to date about what other people think                              | Knowing what other people think                |                                   |                                   |                                      |
| Authentic learning, better possibilities for real life examples               | Authentic real life examples                   |                                   |                                   |                                      |
| Reaching more students and communicating in a better way                      | Reaching more students                         | More students involved            | Increased student involvement     |                                      |
| Promote discussions, improve collaboration among the students                 | Promote discussions among the students         | Promotion of discussions          |                                   |                                      |
| Ways to gain feedback increase  | Gaining feedback increases                     | Increased feedback                |                                   |                                      |
| Possibilities of selling courses abroad                                       | Selling courses abroad                         | Selling services                  | Promotion of institution          |                                      |
| Disseminate school's activity to others. Improve the visibility of the school | Disseminate school's activity                  | dissemination                     |                                   |                                      |

| Meaning Unit  | Abstracted unit  | Sub-theme 1                    | Sub-theme 2    | Theme |
|---|--|--------------------------------|----------------|-------|
| Social media improves the external image of a university/ institution | improves the external image of a university/ institution | Improving image of institution |                |       |
| Using paper less is good for ecology                                  | Less paper is good for ecology                           | Better ecology                 | Economical use |       |
| networking all over the world, less travel time                       | networking all over the world saves travel time          | Saved travel time              |                |       |

Discussing the second dimension – perceived advantages of social media, lecturer insights are presented in Table 5. The theme of lecturer perceived advantages of social media involves numerous sub-themes:

- Promotion of information exchange
- Increased student involvement
- Promotion of institution
- Improved environment

The sub-theme promotion of information exchange is tightly connected with the use of social media. It involves such factors like abundance of information, opportunity to be informed about the activities and ideas of others “useful to be aware of other’s activities, knowing what other people think” and reflects the possibility to share ideas and various information.

The following sub-theme of increased student involvement reveals positive lecture attitude on how media could promote student participation via reaching vast numbers of students, enhancing discussions and feedback “promote discussions among the students, gaining feedback increases” As well lecturers value institution promotion pointing out that social media provides possibilities of disseminating institution activities, selling courses abroad and improving the image of the institution. It becomes evident that the image of the institution is important for the lecturers. In addition, social media helps economical use as paper consumption is reduced and possibilities networking all over the world lessen travel and save travel time. Cost-effectiveness and possibility to

reach vast numbers of people in almost no time are the features discussed by Hancock (1998)

**Table 6.** Perceived problems (lecturer issues of using social media)

| Meaning Unit  | Abstracted unit   | Sub-theme 1                      | Sub-theme 2                                 | Theme                     |
|---|---|----------------------------------|---|---------------------------|
| It takes time to find the correct information   | It takes time to find information                                 | Time for finding information     | Difficulties processing information         | Issues using social media |
| Unreliability of users generated content  | Unreliability of content  | Unreliable content               |   |                           |
| Sometimes highly distractive  | Highly distractive  | High distraction                 |   |                           |
| Too much information, difficult to select   | Too much information  | Information overload             |   |                           |
| Sometimes there are technical difficulties  | There are technical difficulties                                  | technical difficulties           |   |                           |
| Communication in social networks quite often lacks mutual respect and is full of rude remarks | Communication in social networks quite often lacks mutual respect | Lack of respect in communication | Difficulties communicating via social media |                           |
| You have to be careful on what you make public  | careful on what you make public                                   | Careful about publicity          |   |                           |

The third dimension concerning the perceived problems of using social media reveals the issues lecturers perceive:

- Difficulties processing information
- Difficulties communicating via social media (see Table 6).

The sub-theme of difficulties processing information includes such impediments like information overload, time used to find the necessary information and sometimes the unreliability of the content. The unreliability is closely connected to what social media theoreticians identify as information credibility problem which appears with the possibility pro-

vided by wiki media to copy correct, use and reuse information. Such processes naturally create “information inaccuracies”. Moreover, social media might be highly distractive and users might face technical difficulties which limit or postpone user access to the necessary information. The other serious issue is quality of communication related to difficulties while communicating via social media. Publicity awareness might make lecturers somehow reserved and conscious that they have to be “careful on what you make public”. As well lecturers point out that lack of respect in communication could be observed on social media. However, it might be connected to what Trowler (2003) points out, there is a tendency that students find the lecturer authority alien and students want to learn from persons they like while lecturers are still used to the institutionalized authoritative order.

**Table 7.** Change manifestations (lecturers)

| Meaning Unit   | Abstracted unit   | Sub-theme 1                      | Sub-theme 2                        | Theme                          |
|--|---|----------------------------------|------------------------------------|--------------------------------|
| Material will have to move from the text, Social media is still text-based. More video, more multimedia                        | Material will have to move from the text to more video, more multimedia | Moving form text to video        | Shifting to video information      | Social media generated changes |
| E-systems which save time and resources costs should be created  | E-systems will save time and resources costs                            | Saved time and resources         | Improved time and resource control |                                |
| The use of social media will make physical organizations redundant. A lot of the higher education institutions will disappear. | The use of social media will make physical organizations redundant      | Physical organizations redundant |                                    |                                |

| Meaning Unit  | Abstracted unit  | Sub-theme 1                             | Sub-theme 2                         | Theme  |
|---|--|---|-------------------------------------|--|
| One possibility might be to use group video chat to replace the face-to-face meetings we still have. Students could then stay at home for classes   | One possibility might be to use group video chat and students could stay at home for classes | Students could stay at home for classes |                                     |  |
| The most important challenge is that using social media becomes common in the university. It should not be something individuals do, but has to be the task of every member in the teaching staff | using social media should become common in the university                                    | Become common in university studies     | Need for incorporating social media | Challenges adapting social media for studies |
| It is important to use for studying not for general chatting on other subjects  | It is important to use it for studying   | Time for training staff                 |                                     |  |
| Allow staff time to learn and plan  | Time for staff to learn and plan   |   |                                     |  |
| At the moment the staff is not ready for this change  | the staff is not ready for the change  | No readiness for the change             | Perceived areas for improvement     |  |
| Not everyone has the necessary skills to take social media into use   | Not everyone has the necessary skills  |   |                                     |  |

| Meaning Unit   | Abstracted unit   | Sub-theme 1                                   | Sub-theme 2 | Theme |
|--|---|---|-------------|-------|
| Teachers are not used to these tools Lack of ideas how to use these tools for educational purposes         | Lack of ideas how to use the tools for educational purposes                             |   |             |       |
| Too little support technically and pedagogically   | Not enough support technically and pedagogically  |   |             |       |
| Equality in roles. Teachers will have to change their idea of being on the higher hierarchy than students. | Teachers will have to change their idea of being on the higher hierarchy than students. | Teachers have to change hierarchy perceptions |             |       |

The dimension of change manifestation in lecturer case includes two main themes such as social media generated changes and challenges adapting social media for studies.

Speaking about social media generated changes, they fall into certain sub-themes:

- Shifting from text to video information
- Improved time and resource control (see Table 7).

Shifting from text to video is discussed by McLuhan (1994) who speaks about the change of linear textual form into multiple concentric form of infinite crossing of meanings which interact all together, multiple forms of media exist in interaction with each other.

The two sub-themes represent the features of the new teaching/ learning model conditioned by the use of social media. According to Hancock (1998) such features are possibilities to visualize information and present ideas and information in a visually enriched way. As well, social media provides possibilities to manage time and resources in ways unknown before the existence of social media. Lecturers even predict the disappearance of physical institutions and possibilities for students



to participate in classes from home “the use of social media will make physical organizations redundant... and students could stay at home for classes”. The theme of challenges adapting social media for studies contains two sub-themes: need for incorporating social media into studies and perceived areas for improvement. Lecturers recognize the necessity to incorporate social media into the university infrastructure and make them a common study tool as well as provide the necessary training for the staff. Speaking about the perceived areas for improvement lectures recognize that “the staff is not ready for the change”, people lack necessary skills and ideas how to use social media for education. There is a need for technical and pedagogical support. Eventually lecturers recognize that inevitably the hierarchy perception has to change under the influence of social media. They express the perception that social media democratizes teaching/learning process, dissolves higher teacher hierarchy.

### 5.2.3.2. Student experience

The theme student use of the social media includes two sub-themes similar to the teacher use:

- Contacting people
- Sharing information (see Table 8).

**Table 8.** Social media application (student use of social media)

| Meaning Unit  | Abstracted unit                  | Sub-theme 1           | Sub-theme 2       | Theme                       |
|---|----------------------------------|-----------------------|-------------------|-----------------------------|
| To keep in touch with old friends                               | To keep in touch with friends    | Contacts with friends | Contacting people | Student use of social media |
| To keep in touch with family members                            | To keep in touch with family     | Contacts with family  |                   |                             |
| To stay in contact with teachers and connect with their network | To stay in contact with teachers | Contact with teachers |                   |                             |
| Meeting new people via social media                             | Meeting new people               | Building new contacts |                   |                             |

| Meaning Unit  | Abstracted unit                     | Sub-theme 1       | Sub-theme 2         | Theme |
|---|-------------------------------------|-------------------|---------------------|-------|
| Business contacts and opportunities, job searches           | Business contacts and opportunities | Business contacts |                     |       |
| Sharing knowledge, sharing experience on study difficulties | Sharing knowledge and experience    | Sharing knowledge | Sharing information |       |

Students point out that they use social media not only for keeping existing social contacts like friends and family “to keep in touch with friends, family” but also for meeting new people. As well students identify that they use social media for study and business contacts “to stay in contact with teachers, business contacts and opportunities”

The other important sub-theme is sharing information which includes “Sharing knowledge, sharing experience on study difficulties” It reveals that students are willing to share not only knowledge but also experience on how to solve study difficulties which is a sign of collaboration of students on social media.

**Table 9.** Perceived advantages (students)

| Meaning Unit  | Abstracted unit                              | Sub-theme 1                                  | Sub-theme 2                    | Theme  |
|---|--|--|--------------------------------|--|
| You can reach many people at the same time. Distance doesn't matter | reach many people at the same time           | Better opportunities for sharing information | Increased information exchange | Student perceived advantages of social media |
| Social media means sharing more information                         | sharing more information                     |  |                                |  |
| You can work easily together for the study. We share summaries      | work easily together for the study and share | Better collaborative study                   | Collaboration                  |  |

| Meaning Unit                                      | Abstracted unit                       | Sub-theme 1 | Sub-theme 2 | Theme |
|---|---------------------------------------|-------------|-------------|-------|
| It's easy to ask other students for their advice. | Easy to ask other students for advice |             |             |       |

Student perceived advantages of social media include:

- Increased information exchange
- Collaboration (see Table 9).

Speaking about increased information exchange students express their perception of social media enabling the users “to reach many people at the same time” and share more information. Under the other sub-theme – collaboration research participants speak about working together for the study, asking each other for advice and sharing their produced materials.

**Table 10.** Perceived problems (student issues of using social media)

| Meaning Unit   | Abstracted unit                                    | Sub-theme 1                  | Sub-theme 2    | Theme                                    |
|--|--|------------------------------|----------------|--|
| But its takes longer to get an answer, by telephone you'll get the response immediately      | its takes longer to get an answer, not immediately | Longer time for responses    | Time consuming | Student perceived issues of social media |
| Social media requires spending more time online  | spending more time online                          | Increased online time        |                |  |
| Takes a lot of time but without it I would not be able to collect all the information I need |  |                              |                |  |
| Information on social media is not always reliable   | Information is not always reliable                 | Unreliability of information | unreliable     |  |

The theme Student perceived issues of using social media includes two problematic features:

- Time consuming
- Unreliable (see Table 10).

Under the feature that social media seems to be time consuming it is voiced that no immediacy determines longer time to get an answer. As well students identify that they spend more time online “takes a lot of time but without it I would not be able to collect all the information I need” Searching for the necessary information sorting it out in the constant information flow requires time. The other problem is that information is not always reliable as it has been discussed above.

**Table 11.** Change manifestations (students)

| Meaning Unit  | Abstracted unit   | Sub-theme 1                                 | Sub-theme 2                       | Theme                                  |
|---|---|---|-----------------------------------|--|
| If you want your students to be active, they must get something in return. Students must be rewarded for their contribution.                    | Students must be rewarded for their contribution if you want your students to be active | Student activity increased by rewards       | Student involvement encouragement | Students expectations and requirements |
| Give consideration for the needs of the students  | consideration of the needs of the students  | Attention to students needs                 |                                   |  |
| Students must participate, university itself gains knowledge from that  | Students must participate   | Necessity of student participation          |                                   |  |
| More emphasis should be put on the social psychology of the student who ‘lives’ in the social media and what is their relationship with society | More emphasis on the social psychology of the student who ‘lives’ in the social media   | Addressing psychological issues of students | Need to address students issues   |  |
| More security aware social media, more projects led by psychology aware people  | More security aware social media  | Raising security awareness                  |                                   |  |

| Meaning Unit   | Abstracted unit   | Sub-theme 1                                    | Sub-theme 2              | Theme |
|--|---|--|--------------------------|-------|
| More information about security in social media  | More information about security   |  |                          |       |
| Clearer framework for those who are not familiar with social media   | Clearer framework to familiarize with social media  | Provision of familiarization with social media |                          |       |
| I would like everyone to be braver and express their real opinions without fear, I'd also like those whose opinions are addressed to, to respond to them   | I would like everyone to express their real opinions without fear                                 | Need to express opinions                       |                          |       |
| There should be online consultations, question sessions with the teacher   | online consultations, question sessions with the teacher  | Promoted online teaching                       | Need to improve teaching |       |
| Lessons should be put on the platform to give the way to those absent to have the material of the lessons at home  | Lessons should be put on the platform to have the material at home                                |  |                          |       |
| Teachers are often aware what social media's world concern, actually sometimes they are even more acknowledged than us, for what e-learning concerns for instance, but they remain on traditional teaching using old tools | Teachers are often aware and acknowledged but they remain on traditional teaching using old tools | Persistence of traditional teaching            |                          |       |

Under the dimension of change manifestations the theme of student expectations and requirements is distinguished. It reflects students concerns and wishes connected with the change in education brought on by the use of social media. Student expectation theme includes the sub-themes such as:

- Student involvement encouragement

- Need to address students issues
- Need to improve teaching (see Table 11.).

Speaking about the encouragement of student involvement students express their attitude that attention should be paid to students needs and student participation should be encouraged and stimulated “students must be rewarded for their contribution... give consideration for the needs of the students” Students voice their inclination to be actively involved in the study process, to be encouraged and to be able to express their needs. What is more, they would like their needs to be satisfied by the actions of the institution. In addition students expect real institution aid especially concerning the question of addressing students issues which on the basis of the interviews appear to be the following:

- Addressing psychological issues of students
- Raising security awareness
- Provision of familiarization with social media
- Need to express opinions

Obviously students expect the support of the institution in the process of familiarization with social media tools for those who need “clearer framework for those who are not familiar with social media” As well students expect the institution to provide psychological help and security while using social media “more emphasis should be put on the social psychology of the student who “lives” in the social media and what is their relationship with society... more security aware social media”. The interviews with the students reveal the concern about psychological issues students face while dealing with social media.

Another student concern is expression of opinions without fear, which is connected with identity issues. Bauman (2011) reveals that the play of multiple identities becomes a norm in social media, opinions become just a matter of choice which is determined by ever changing fashion whimsicality. Opinions like clothes which were fashionable last season get completely out-of-date next season. Being old-fashioned is a stigma in the consumer world, so who would risk express an unfashionable opinion without fear?

In addition, students speak about the need to improve teaching processes. They acknowledge that teachers are well-aware of social media

sometimes even more than the students themselves but the use of traditional teaching persists “teachers are often aware and acknowledged but they remain on traditional teaching using old tools” Students express the need for online teaching promotion, they would like more activities online such as consultations, question sessions and all the materials available online “there should be online consultations, question sessions with the teacher, lessons should be put on the platform to give the way to those absent to have the material of the lessons at home”.

#### 5.2.3.3. Administrator experience

In the dimension of social media application the theme of the administrator use of social media includes three sub-themes:

- Information exchange
- Communication
- Promoting student/client engagement (see Table 12.).

**Table 12.** Social media application (administrator use of social media)

| Meaning Unit  | Abstracted unit                                      | Sub-theme 1                               | Sub-theme 2                         | Theme                             |
|---|--|---|-------------------------------------|-----------------------------------|
| Use social media for exchanging ideas   | Use it for exchanging ideas                          | Exchanging ideas                          | Information exchange                | Administrator use of social media |
| I write some comments to the articles and answer the other people's comments  | write some comments to the articles                  | Sharing comments                          |                                     |                                   |
| Use social media for communicating with institute members                     | communicating with institute members                 | Communicating with colleagues             | Communication                       |                                   |
| Use it for building a society of continuous education customers and prospects | building a society of continuous education customers | Forming customer group Building clientele | Promoting student/client engagement |                                   |
| It's a good way to acquire new students                                       | a good way to acquire new students                   | acquiring new students                    |                                     |                                   |
| Easier to reach future students   | to reach future students                             | Reaching new students                     |                                     |                                   |

The sub-themes reveal the main areas administrators use social media in. They use social media for information exchange, which involves exchanging ideas and sharing comments, communication and promoting student/client involvement. The sub-theme of student/client involvement reveals administrator interest in the institution clientele and is directly connected with administrator job matters. Administrators use social media “to acquire new students... for building a society of continuous education customers and prospects”.



**Table 13.** Perceived advantages (administrators)

| Meaning Unit   | Abstracted unit                                    | Sub-theme 1                   | Sub-theme 2                    | Theme  |
|--|--|-------------------------------|--------------------------------|--|
| Gives more opportunities for advertising ourselves, to show the positive aspects of organizing the study process                           | Gives more opportunities for advertising ourselves | Advertising opportunities     | Institution promotion          | Administrator perceived advantages of social media |
| It increases visibility of institution   | increases visibility of institution                | Improving institution image   |                                |  |
| The organization appears modern  | organization appears modern                        |                               |                                |  |
| Reputation, keeping pace, Student flexibility and engagement, new markets, support overseas students, partner institution, widening access | Reputation and widening access                     |                               |                                |  |
| It ensures speedy information sharing  | speedy information sharing                         | Increased information sharing | Information exchange promotion |  |
| It increases communication and sharing   | increases communication and sharing                |                               |                                |  |
| Independence of time and place, more visuality, all senses into play   | Independence of time and place                     |                               |                                |  |

The theme of administrator perceived advantages of social media includes:

- Institution promotion
- Information exchange promotion (see table 13.).

The first sub-theme of institution promotion is closely tied with advertising opportunities and improvement of institution image as administrators say, “gives more opportunities for advertising ourselves, increases visibility of institution”. The information exchange and promotion includes such aspects as speed of sharing information, increased communication and independence of time and place.

**Table 14.** Perceived problems (administrator issues of using social media)

| Meaning Unit   | Abstracted unit  | Sub-theme 1                               | Sub-theme 2        | Theme                          |
|--|--|---|--------------------|--------------------------------|
| “eats” time, takes time away from quiet reflection                                 | takes time away from quiet reflection                          | Time for managing social media activities | Time consumption   | Administrator perceived issues |
| More time for managing the relationships and the communication social media induce | More time for managing the relationships and the communication |   |                    |                                |
| It takes time to take social media into use  | takes time to take into use                                    | Time for mastering social media           |                    |                                |
| There is lack of technical skills  | lack of technical skills                                       | Need for skills                           | Training necessity |                                |
| Not everybody is ready to use social media   | Not ready to use social media                                  |   |                    |                                |
| Teachers need more guidance considering the use of social media                    | Teachers need more guidance                                    | Need to guide teachers                    |                    |                                |

| Meaning Unit   | Abstracted unit  | Sub-theme 1                          | Sub-theme 2              | Theme |
|--|--|--------------------------------------|--------------------------|-------|
| Many challenges: learning quality control, level of education  | challenges for learning quality control                                  | Complicated learning quality control | Limited learning control |       |
| SM will change the way we learn, probably make it more natural but less controllable, defining learning goals could be more difficult, examination of knowledge could be difficult | the way we learn, becomes less controllable                              |                                      |                          |       |
| It makes it complicated, control of learning results, systems to control the students  | Complicated control of learning results, systems to control the students |                                      |                          |       |
| Little institution control is possible   | Little institution control   |                                      |                          |       |

The administrator perceived issues contain:

- Time consumption
- Training necessity
- Limited learning control (see Table 14.).

Administrators point out that social media takes more time itself “more time for managing the relationships and the communication” as well takes time for mastering it “it takes time to take social media into use”. In addition, they see the necessity for training staff admitting that “not everybody is ready to use social media... there is lack of technical skills”. Another issue administrators name is limited learning control. It seems that administrators are concerned about the way social media influences teaching/learning process “it makes it complicated, control of

learning results, systems to control the students... little institution control is possible". According to Foucault (1998) educational institutions have ritualized their practice to discipline and control. It could be heard in administrator comments expressing their controlling approach. However following the insights by Deleuze (1987) the hierarchical democracy loses its positions in social media culture instead democracy without any visible centre manifests itself in mosaic social media world. Administrator comments just reveal the undergoing change which symptoms are difficult to control at the same time disclosing the wish to control.

**Table 15.** Change manifestations (administrators)

| Meaning Unit  | Abstracted unit   | Sub-theme 1                         | Sub-theme 2                | Theme               |
|---|---|-------------------------------------|----------------------------|---------------------|
| The institution provides an infrastructure on which the teaching staff can make available/ choose social media-based services to be used for teaching/ learning | The institution provides an infrastructure for the teaching staff | Institution provided infrastructure | Infrastructure development | Institution support |
| University provides financial help for social media, technical and infrastructure support   | University provides financial help                                | Provided financial help             |                            |                     |
| University is offering training sessions to staff   | University is offering training sessions                          | Provided training                   | Staff development          |                     |
| University provides guidance for teaching staff   | guidance for teaching staff,                                      |                                     |                            |                     |
| Technology information, advice and assistance for students  | advice and assistance for students                                |                                     |                            |                     |

The theme of institution support is a part of change manifestation dimension. The main sub-themes displayed in the interviews are:

- Infrastructure development
- Staff development (see Table 15.).

Infrastructure development identifies how institution supports the application of social media by providing financial help, technical and overall infrastructure improvement. It shows that institutions admit the importance of social media and express it in terms of material support. In addition institutions provide training and guidance for the staff as the main force of promoting social media in the institution.

#### 5.2.4. Issues

The section analyses the contradictions which are faced in the process of social media adoption in different institutions participating in ISTUS project across Europe. It highlights the issues of social media adoption faced by the three different groups of teaching/learning process participants interviewed in the framework of the project.

The analysis is based on the survey conducted at different European institutions which include mostly universities, 3 VET schools, 1 university of third age and 1 private distance learning institution. The institutions provide study programs ranging from undergraduate to PhD where learning takes place onsite or in a mixed mode. 25 interviews with administrators, 25 interviews with teachers and 26 interviews with students were conducted in the course of the survey.

The first noticeable issue which could be derived from the dimension of the perceived problems of using social media is information literacy. The contradiction between the abundant use of social media for sharing information and difficulties processing information, reliability, the time spent on social media lead to the key issue – the necessity information literacy skills augmentation. Lecturers identify difficulties processing information, information overload, time used to find the necessary information and sometimes the unreliability of the content. Similar difficulty is identified by students who point out that searching for the necessary information sorting it out in the constant information flow requires time.

Besides the information found is not always reliable. Administrators as well mention that social media is time consuming "...more time for managing the relationships and the communication..." as well takes time for mastering it "...it takes time to take social media into use..." All the three groups of the survey participants: lecturers, students and administrators identify the problems of processing information obtained from social media. Information literacy stands out as a key skill necessary for successful information managing on social media. According to the definition of information literacy provided by American Library Association (1989) information literacy is a set of abilities requiring individuals to recognize when information is needed and have the ability to locate, evaluate, and use effectively the needed information. Information literacy becomes increasingly important due to the rapid technological change and the abundance of information resources. People are faced with diverse information modes and sources and have to process information according to the needs of their study, work or personal lives and use information effectively. Incorporation of information literacy across curricula in the educational institutions becomes essential and requires the effort of the faculty and administrators.

Another emerging issue is due to the inherent democratic nature of social media. As Deleuze (1987) points out that the hierarchical democracy loses its positions in social media culture instead democracy without any visible centre manifests itself in mosaic social media world. Lecturers observe lack of respect in communication via social media. Administrators are concerned about the control of learning process while students would like more student participation "...students must participate, university itself gains knowledge from that..." they feel like active participants in the process of knowledge creation. Students as active social media users are used to the mosaic world of hypertext and feel that they are able to contribute to knowledge construction at university. On the contrary lecturers and administrators express their inclination to feel respected and control the teaching learning processes. As it is observed by Foucault (1998) educational institutions have ritualized their practice to discipline and control. However, the application of social media acts as a driving force towards democratization of educational processes.

Identity issue expressed by students reveals a contradiction concerning free expression of opinions. As Bauman (2011) claims that opinions like clothes which were fashionable last season get completely out-of-date next season. Being old-fashioned is a stigma in the consumer world, so students feel that they risk expressing an unfashionable opinion. Personal identity becomes an object to be hidden or not expressed, lost in the mosaic game of media stimulated and forced on play of identities where constant identity change, dismissal of the old one and seeking for new manifestations become a must.

It is closely connected to security issues on social media where identity management becomes important. Some people express their concern about safe identity management, prevention of identity theft. Privacy issue is additional concern on social media since many social network users are not careful about what they expose on their social network space. As research participants put it "...you have to be careful on what you make public..."

The change of teaching/learning processes evokes additional contradiction. Students express their expectations for changing teaching "...teachers are often aware what social media's world concern, actually sometimes they are even more acknowledged than us, for what e-learning concerns for instance, but they remain on traditional teaching using old tools...". According to Prensky (2001) contemporary students represent new generation who grew up with new technologies. Computers, email, the Internet, quick messaging, mobile phones are an integral part of their lives. So Prensky (2001) introduces the term Digital natives because so called digital language is native for them. Whereas their teachers Digital immigrants Prensky (2001) mastered digital language later in their lives and their perception and skills are not so perfect. The author identifies educational problem, that Digital immigrants try to teach digital natives whose habits of information reception and perception are different. So Digital immigrants face the fact that they have to master social media, learn to communicate in their student language and style, have to accept the mosaic simultaneous their student reality. The concept of Digital immigrants introduced by Prensky (2001) may seem to be too far-reaching, however teachers cannot shut from the digital reality which brings social

media into teaching/learning, they have to admit and accept the new reality. Similarly the problem of accepting digital reality of social media is discussed by McLuhan (2003) who admits that the era of mechanical and linear *associationism* philosophy prevalence has come to an end, linearity has been replaced by electricity era with its simultaneity and concentric nature with infinite crossing of planes where all types of media constantly interact with each other. However, changes require effort and time to master the technologies. Need for training to internalize social media into teaching/learning processes is expressed by all the three groups of research participants: lecturers, students and administrators. Even students admit certain necessity to receive guidance for using social media for learning "...clearer framework for those who are not familiar with social media..." noticing that there are different social media mastering skills among students.

Speaking about learning social media stimulates a closer fusion between formal and informal learning. On one hand students find more possibilities for sharing knowledge, collaboration working with other students without teacher guidance "...sharing knowledge, sharing experience on study difficulties..." On the other hand students express their wish to be guided and evaluated by lecturers "...there should be online consultations, question sessions with the teacher..." According to Siemens (2004) connectivism theory informal learning becomes a significant aspect of learning experience. Technology alters the ways people process information and learning becomes the process of connecting specialized information sets, prioritizing choosing what to learn being able to see the connections among multiple fields, ideas and notions. In the process of handling multiple choices, connecting multiple ideas lecturers may become facilitators, advisors which information and ideas to chose showing the basic grand theories and the ideas supporting them. Lecturers may help their students glide more easily in the multi-faceted ocean of multiple information. However, students express their need more for guidance rather than control in such a way the role of institutional culture, the role of lecturers should shift more to the guiding paradigm rather than controlling. Social media inevitably demands for a more democratic less formalized way of teaching/learning which is still a



barrier for administrators to overcome as they express their worry about the less controlled learning process.

Another issue expressed by the lecturers is redefinition of educational institutions. The restructuring and fragmentation of the postmodern world forces the modern man to take independent decisions and construct personal reality, reconstruct personal, social and working world. (Glastra et al. 2004)

Lecturers express the feeling that educational institutions might undergo essential changes "...the use of social media will make physical organizations redundant. A lot of the higher education institutions will disappear..." or "...one possibility might be to use group video chat to replace the face-to-face meetings we still have. Students could then stay at home for classes..." As McLuhan (2003) states that the age of technologies and electricity has redefined the nature of work, it freed people from repetitive mechanistic work and opened up possibilities to participate in the society creatively, it created decentralized multitude of work. Although social media gives more opportunities to advertise institutions to attract new clientele as the administrators stress "...gives more opportunities for advertising ourselves, to show the positive aspects of organizing the study process..." and "...reputation, keeping pace, student flexibility and engagement, new markets, support overseas students, partner institution, widening access..." at the same time social media redefines the nature of lecturer work the nature of education itself. Here administrators admit that "...it takes time to take social media into use..." and "...teachers need more guidance considering the use of social media..." and they are ready to provide the training and the guidance "...university is offering training sessions to staff, provides guidance for teaching staff, advice and assistance for students..." The process of social media internalization is continuing and hopefully it will open the ways of expression of human creativity in the society. As Castells (2007) states "Information age promises to free incredible potential of productivity based on the power of thinking. Hopefully we could allow ourselves the luxury to seek spirituality to reconcile with nature without sacrificing the well being of our children. The dream of the Enlightenment Age that mind and science will solve all the problem of humanity is within the reach of a hand.

However, there is a deep abyss between our technological acceleration and social backwardness. Our economy, society and culture are based on interests, institutions and systems of representation which in essence limit collective creativity, expropriate the achievements of information technologies and direct our energy towards auto-destructive confrontation. It should not be like this. There is no permanent evil in the human nature. There is nothing which could not be changed by conscious targeted social action. If people were informed, active and would communicate all over the world, if business accepted social responsibility, if media were a messenger instead of being a notification. If we demonstrated solidarity, if reconciled with each other we would disengage from others in order to find our own inner world. Maybe then we would be able to live ourselves and let others live, would be able to love and to be loved.” (Castells, 2007, p. 371)

#### 5.2.5. Positive effects

All the three groups of research participants – lecturers, students and administrators, use social media for communication and sharing information. As Kietzmann and Hermkens (2011) speak about functional blocks of social media pointing out that communication block represents the ways social media users converse with each other. They may converse for various reasons, research participants identify that they communicate with their friends, colleagues and organizations for personal and professional interests. Apart from personal contacts lecturers communicate with their students and other organizations for educational purposes, students search for business contacts, administrators try to represent their institution and attract new clientele. Information sharing block as well appears to be very important for the research participants. They share new ideas, information on organizations and studies, lecturers share visual and other study materials with their students, students share information on study difficulties and collaborate solving them, administrators exchange ideas and as well get engaged in the process of “... building a society of continuous education customers and prospects...”

informing their prospective customers on study opportunities, sharing information on the institution.

The dimension of perceived advantages represents positive social media influence while incorporating technology in adult education. According to Hancock (1998) modern information technologies including social media may influence education. The author distinguishes certain features of education stimulated by social media:

- Possibility to reach vast numbers of people almost instantly
- Economical nature, saving resources
- Information visualization
- Individual nature (video and audio materials could be used individually)
- Wide access to information
- Simulation (various types of projects which enable the use of various sensory channels)
- New forms of creativity

Lecturers speak about wide access to information mentioning that social media increases the possibilities to share information, to exchange ideas. As they put it “...getting up to date about what other people think...” Another feature mentioned is possibility to reach vast audiences “...reaching more students and communicating in a better way...” Lecturers feel that bigger numbers of students could be reached and some features make communication better, for example, possibilities of instant feedback and discussions. They stress the importance of institution promotion, dissemination of educational activities, institution representation and creating and promoting an image of an institution making it attractive to students. Lecturers mention economical feature as well saying that social media enables to save paper, travel time and makes education more accessible by being more economical “...networking all over the world, less travel time...”

Students mention wide access to information as well. Multiple sources of information and multiple users could be reached which leads to working together, collaboration in exchanging and creating knowledge. Collaborative new knowledge creation is related to new forms of creativity when creativity becomes not only individual secluded process

but also manifests itself in the process of sharing, working together, collaborating and creating.

Administrators stress the importance of wide access to information. They mention such features like visualization of information and even more - the use of all sensory channels "...independence of time and place, more visuality, all senses into play...'

All the features mentioned are essential and influence adult education. Participators of educational processes face enhanced communication via social media, enhanced access to information resources, engagement of all the sensory channels, collaborative creation of new digital content and education participators perceive the features as positive as moving adult education towards improvement, towards new quality and dimension which could only be envisioned.

**6.**

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## CONCLUSIONS

Generally speaking, the institutions of adult and higher education inevitably have to face the technology-driven challenges and often the institutions that seek to meet the needs of contemporary learners and that adopt systematic approach to achieve the aim cope successfully with the challenges of adoption of social networking and social media for educational purposes. The use of social networks and social media for educational purposes raises considerable controversies and the research of the issues in question on European level and also globally only gives answers to some issues. Literature reviews and research provide sufficient evidence that the use of social media for educational purposes should be fostered, and awareness about possibilities offered by social media in teaching/learning should be raised so that social media and social networking start to be perceived not only as a pastime but also a potential multi-faceted educational resource both for individual learners and educational institutions.

Globalization and modernization processes have given birth to a diverse and networked world where people need to master permanently changing technologies and process a large amount of available information. In this context competencies that adult learners need to achieve their individual aims are increasingly complex, requiring more knowledge and skills compared to the mastery of narrowly defined skills. These competencies should be given much greater attention seeking to build a democratic system of governance with participation of active, critical and independent citizens.

Marking *the shift* of researchers' interest from the *use of technologies in education* towards *information as the resource in the construction of knowledge*, information, its content with emphasis on the knowledge society values, accessibility, scope and diversity of formats have occurred in the focus of present day research.

Innovations and a paradigm shift in education are often related to the application of information and communication technologies (ICTs) and e-learning. ICTs are a potentially powerful tool for extending educational opportunities, both in formal and non-formal education. ICTs are closely associated with the e-learning and their analysis is often pre-

sented in an integrated manner. E-learning is based on the use of ICT and includes all electronic and interactive tools.

Scaffolding of learners by using modern technologies and information processing techniques stands as one of the major issues related to the quality of studies and adult learning. Moreover, holistic approach to ICT in education involves discussion about ICT integration into learning process from the perspective of social and cultural aspects of understanding, stressing values, on which education and decisions related to education should be made.

Many educators are now stressing the importance of Web 2.0 tools in learning process: social networks, blogging, micro-blogging, instant messaging, etc. These tools being available in many modern colleges and universities create new opportunities for faster and more efficient learning.

One of the most important characteristics of electronic learning environment is interactivity between teacher and students.

E-learning opportunities for learners to interact with each other and with teachers and provide a wide range of materials also create preconditions for deep learning.

ICT also facilitate cognitive processes and assist in understanding professional challenges. Technology integration perspective is an important factor in studies and sometimes a determining factor from cultural, social and value viewpoint.

Different Web 2.0 tools are used for storing, managing, broadcasting, communicating and sharing information (the Internet, radio, television, social networking) in the classroom and other educational settings.

Information literacy (IL) has emerged as a modern world reality influenced by societal, economic, political changes, development of sophisticated technologies, information overload, labour market demands and lifelong learning imperative.

ICT development and ultimately increase of information flows encouraged to analyze the concept of information literacy in the context of these factors. Information literacy as a phenomenon of recent times is changing the quality of modern life, education in particular. Candy

(2003) highlights five dominant changes in our life affecting the understanding of learning and learning process in contemporary society:

- changes in relationships within the family and community;
- unprecedented explosion of information;
- changing nature of work;
- globalization;
- new technologies.

In the context of abundance of information the relevance of information literacy is unquestionable, emphasized as a response to the “information overload” (Candy, 2003; Bundy, 1998, Bruce 1997, 2000, 2002). Information literacy describes individual capacity of self-directed study such as the ability to use diverse information resources in different formats, share information and knowledge in a lawful and ethical manner. Thus, communication and collaboration are the integral part of information literacy development.

Information literacy conception incorporates other literacies, necessary in the modern society (*computer literacy* or *IT literacy*, *information technology*, *electronic*, or *electronic information literacy*, *media literacy*, *networked literacy*, *digital literacy*). There are certain elements that link all the definitions of information literacy: understanding the information need, information search, its use, evaluation, application for personal needs, and communication.

Information literacy defines much more general abilities such as self-directed learning, abilities to utilize a variety of information resources and formats, have deep understanding and knowledge of the information world, and internalize values that motivate ethical and legal information use.

Information literacy is necessary for people to be effective lifelong learners and to contribute in the knowledge society. This is why information literacy was endorsed by UNESCO’s Information for All Programme (IFAP) as a basic human right.

Information literacy is a crucial tool in developing health and well being for all people. Information literacy has become a relevant adult education (learning) perspective. It is seen as an integral component of



independent learning, respectively, it is an integral component of lifelong learning.

In 2007, UNESCO initiated the development of a set of Information Literacy (IL) indicators which would allow measuring information literacy (skills) at national and individual levels and knowing the extent to which their citizens are able to participate in knowledge society.

Information Literacy and Media Literacy are traditionally seen as separate and distinct fields. However, challenges of modern life encouraged to link Media and Information Literacy. UNESCO's strategy brings together these two fields as a combined set of competencies (knowledge, skills and attitude) necessary for life and work today. In 2011, UNESCO decided to apply a joint approach including media literacy in already ongoing IL indicators development process.

Media and Information Literacy considers all forms of media and other information providers such as libraries, archives, museums and Internet irrespective of technologies used. The UNESCO document is based on many worldwide studies, conferences and workshops over the past thirty years that have sought to define the scope of Media and Information Literacy.

One of the things that is clear nowadays is that Web 2.0 has given impetus to and has accelerated large-scale transformations in education and learning. What is more, teaching and learning are merging into one inseparable process that is no longer possible to be seen as two different processes coming from different directions. User-generated content is increasing the amounts of information; consequently, information abundance means that the learner needs more skills: literacy no longer implies being able to read, it is multimodal, embracing information literacy, media literacy, visual literacy, etc. Thus the learning taking place in social media and social networking implies a wide range of modes of learning and this is why formal education institutions have to quickly adapt to learner needs, learning preferences, and life in digital environments. There are many ways for formal education institutions to use social media and social networking so that the institutions continue to be important and attractive to contemporary learners.

Social media has been a comparatively new multifaceted phenomenon in adult education and as many phenomena of our living world contains and brings about versatile advantages and issues which come along. Speaking about the contradictory aspects of the use of social media in adult education empirical research reveals what issues the research participants name and perceive as important to them. Firstly, all the three groups of research participants: administrators, lecturers and students identify information literacy as one of the factors which needs a wider discussion. They speak about the abundance of information, difficulties processing information, finding the necessary bits, issues concerning the reliability of the sources. It reveals that information literacy becomes increasingly important due to the technological change and the use of social media in adult education. The research participants reveal the necessity to incorporate information literacy across curricula. Next, contradictory area is the democratic nature of social media itself. Hierarchy characteristic to traditional educational settings gradually loses its importance for students while using social media in adult education whereas administrators and lecturers would still tend to exercise control. However, the application of social media acts as a driving force towards the democratization of educational processes. In addition, the expression of personal identity is perceived as problematic by the research participants. Personal identity becomes an object to be hidden rather than expressed as it is manifested according to the rules of the mosaic game of social media. An additional issue closely connected to personal identity appears to be security concerning safe identity management and personal privacy. Another vastly controversial area appears to be the change of teaching/learning processes. Student group of the research participants express their wish for accommodation of teaching/learning to the use of social media. However, such a change requires effort and time to master the technologies and need for training to internalize social media into teaching/learning processes is expressed by all the three groups of the research participants. Also the use of social media in adult education stimulates a closer fusion of formal, non-formal and informal learning. Students express their need more for guidance rather than control in such a way the role of lecturers should shift more to the guiding paradigm rather than controlling as so-

cial media demands for a more democratic less formalized way of teaching/learning. Administrator group of the research participants admit that social media redefines the nature of lecturer work and there is a need for training and guidance for lecturers. The change of teaching/learning processes is closely related to the redefinition of educational institutions additional controversial area discussed by the research participants. The feeling that educational institutions might undergo essential changes is expressed. The changes might involve the structural ones like students staying home for classes and inner ones like the process of social media internalization will open the ways for o expression of human creativity in the society. The controversial areas could be summarized as follows:

- The necessity of information literacy incorporation
- Drive towards democratization of educational processes
- Personal identity expression issues
- Security issues: identity and privacy management
- Change of teaching learning/processes towards guidance rather than control
- Fusion of formal, non-formal and informal learning
- Need for training to internalize social media
- Redefinition of educational institutions

Speaking about the positive effects of social media use in adult education research participants identify many advantages brought about by social media. Firstly, they mention communication in broad sense not only for personal purposes but also for educational as well as representational needs. Next they speak about the importance of information sharing which includes sharing ideas, collaboration in solving problems and informing the participants of the educational processes. Another extensive area of positive effects of social media is a wide access to information which is related to the possibility to reach vast numbers of people almost immediately. The research participants mention economical feature of social media which enables the users to save resources. Social media also provides numerous opportunities to present information visually including various simulations which enable all the sensory channels. Finally, collaborative new knowledge creation manifests itself in using social me-

dia in adult education. The positive effects of using social media could be summarized as follows:

- Enhanced communication
- Wide access to information
- Possibility to reach vast numbers of people almost instantly
- Information visualization
- Simulation (enabling various sensory channels)
- Sharing information
- New forms of creativity
- Economical nature, saving resources

The use of social media in adult education has undeniable positive effects and even being controversial in some ways it has vast opportunities to be used in adult education changing it towards the improvement.

7.

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**SUMMARY**  
**(Santrauka)**

Mūsų pasaulis, kartu ir švietimas, yra veikiamas saityno 2.0 technologijų ir jų pritaikymo, tokio kaip socialinės medijos, atsiradimo. Kai kurie teoretikai ir tyrėjai analizuoja, kaip naujų socialinių technologijų įvaldymas galėtų užtikrinti geresnę gyvenimo kokybę. Kiti tyrėjai perspėja apie riziką susipainioti virtualioje realybėje iškraipant natūralų žmogaus gyvenimą. Nors požiūriai į socialines medijas įvairūs, jų įtaka didėja ir keičiasi informacijos priėmimo bei apdorojimo būdai. Suaugusiųjų švietimo institucijos susiduria su neišvengiama būtinybe integruoti socialines medijas į mokymo(si) procesus. Socialinių medijų taikymo suaugusiųjų švietimui tyrimai buvo atlikti pagal Grundtvig partnerystės projektą „Institucinės strategijos, kurių tikslas – socialinių tinklų panaudojimas suaugusiųjų švietime“ (Institutional Strategies targeting the Uptake of Social Networking in Adult Education (ISTUS)) 2011-2013 metais. Projekto tyrimais bandoma atrasti ir pasiūlyti būdus, kaip suaugusiųjų švietimo institucijos gali naudoti socialines medijas tam, kad pagerintų mokymo(si) procesus, turint mintyje, kad naujos saityno 2.0 technologijos ir jų pritaikymai, tokie kaip socialinės medijos, turi didelę įtaką suaugusiųjų švietimui, savarankiškam mokymuisi, informaciniam raštingumui, mokymuisi visą gyvenimą, mokymo metodikoms ir institucijų strategijoms prisitaikant prie greito technologijų vystymosi.

Studijos tyrimo objektas yra socialinių medijų naudojimas suaugusiųjų švietime, keliant pagrindinį tikslą, - išsiaiškinti, kaip socialinės medijos veikia suaugusiųjų švietimą. Tyrimo uždaviniai apima:

- socialinių medijų supratimo apibrėžimą;
- ryšių tarp IKT ir socialinių medijų nustatymą;
- sąsajų ir sąveikos tarp informacinio raštingumo ir socialinių medijų atskleidimą;
- socialinių medijų vaidmens formaliajame švietime identifikavimą;
- išsiaiškinimą, kiek socialinės medijos skatina neformalųjį ir savaiminį mokymą(si).

Socialinių medijų apibrėžimas kinta ir vystosi kartu su nuolatiniu pačių socialinių medijų vystymusi ir naujų formų atsiradimu. Remiantis Merriam-Webster žodyne pateiktu apibrėžimu, socialinės medijos apima įvairias elektroninio bendravimo formas, tokias kaip socialiniai tinklaraščiai ir mikro dienoraščiai (blogai), kurių padedami vartotojai kuria

virtualias bendruomenes tam, kad dalintųsi informacija, idėjomis, asmeninėmis žinutėmis ir kitu savo sukurtu turiniu. Technologijos leidžia vartotojams bendradarbiauti turinio kūrimo procesuose ir naudojantis įvairiais medijų kanalais nuolat jį keisti ir modifikuoti. Socialinės medijos turi vidinę demokratinę prigimtį, leidžiančią vartotojams aktyviai dalyvauti turinio kūrimo procesuose be specialaus pasiruošimo ar sertifikavimo. Naujos saityno 2.0 technologijos atveria kelią naujoviškoms bendravimo ir kūrybinio bendradarbiavimo formoms internete. Socialinės medijos tampa naujų technologijų taikymo išskirtiniais pavyzdžiais. Daugelis švietimo praktikų ir ekspertų mano, kad socialinių medijų taikymas studijų procese iškelia esminį iššūkį aukštojo mokslo institucijoms, kaip panaudoti socialinių medijų technologijas ir integruoti jas į darnų studijų procesą. Socialinės medijos pačios turi varomąją jėgą, nes jos buvo sukurtos nepriklausomai nuo švietimo institucijų. Tačiau jos gali daryti didelį poveikį švietimui, naudojant jas galima susieti formalųjį ir neformalųjį mokymą(si). Socialinių medijų įrankiai taip pat gali būti naudojami kūrybinio bendradarbiavimo įgūdžiams formuoti, integruojant juos į projektiniu darbu pagrįstas metodikas, kai studentai yra skatinami pradėti darbą, apsibrėžiant galutinį tikslą ir panaudojant įvairius šaltinius ir dalyvius tam tikslui pasiekti. Kadangi kūrybiškumas mokymo(si) procese reiškia naują žinių pritaikymą pačiam besimokančiajam, aukštojo mokslo institucijose kūrybiškumas yra esminis įgūdis, kuris skatina ir kritinį mąstymą. Šis įgūdis yra svarbiausias mokymo(si) procese, kadangi jis reikalauja aukščiausio lygmens mąstymo gebėjimo ir skatina besimokantįjį atrasti naujus mokymosi kelius. Taigi, naudodami informacinių technologijų įrankius problemoms spręsti ir projektams įgyvendinti, studentai demonstruoja aukštą kūrybiškumo lygį, kuris gali būti integruotas į sėkmingą studijų procesą. Kontaktuojant su ekspertais, su bendraamžiais ir papildomais informacijos šaltiniais mokymosi procesą daro įdomesnę ir vertingesnę. Besimokantieji gali palyginti savo darbus ir pasiekimus su savo bendraamžių pasiekimais ir darbais platesniame kontekste. Studentai gali realiai pajusti, kaip jų darbai atrodo studijuojamo dalyko srityje, ir tai padeda praturtinti mokymosi procesą. Besimokantieji gali publikuoti savo darbus viešoje internetinėje erdvėje ir tai skatina studentus suvokti jų darbų reikšmingumą platesniame kon-

tekste. Tokiu būdu skatinamas realus keitimasis informacija, aukštesnis bendradarbiavimo lygis ir kūrybiškumas.

Pastaruoju metu vyksta daug diskusijų apie socialinių medijų naudą ir jų panaudojimą švietime. Nors socialinių medijų panaudojimas studijų procese turi daug privalumų, teoriniu lygmeniu vis dar lieka esminių klausimų. Kalbant apie mokymo turinį ir studijų procesą, tradicinis švietimo aplinkos organizavimas yra labai struktūrizuotas, o socialinių medijų panaudojimas reikalauja mažesnės vartotojų sukurto turinio kontrolės. Tai meta iššūkį tradiciniam požiūriui į efektyvią mokymo – mokymosi proceso kontrolę. Todėl kyla klausimas, kaip laisvas skaitmeninio turinio kūrimas taikant socialines medijas gali būti integruotas į tradicinę mokymo – mokymosi aplinką. Ar įgūdžiai, įgyti socialinėse medijose, tinka tradicinei mokymosi aplinkai?

Šioje studijoje aptariami įvairūs su socialinėmis medijomis glaudžiai susiję aspektai: informacinis raštingumas, jo vaidmuo suaugusiųjų švietimui ir mokymosi procesui, informacinių komunikacinių technologijų (IKT) naudojimas mokymosi procese bei jų poveikis mokymo(si) proceso kaitai.

Informacijos visuomenė transformuojasi į aukštesnę savo evoliucijos pakopą, t.y. į žinių visuomenę, tačiau tokia ji gali tapti, tik būdama besimokančia visuomene. Šiuolaikinės visuomenės kaitą, o drauge supratiimą apie mokymąsi lemia: a) pakitę santykiai šeimoje, b) bendruomenėje; c) beprecedentis gaunamos informacijos sprogimas; d) kintantis darbo pobūdis; e) globalizacija; f) naujos technologijos.

IKT glaudžiai siejamos su e-mokymusi ir jų analizė yra dažnai pateikiama integruotai. E-mokymasis yra grindžiamas IKT ir apima visų elektroninių ir interaktyvių priemonių naudojimą. Technologijų integravimo perspektyva yra svarbus mokymąsi veikiantis ir kartais lemiantis faktorius kultūriniu, socialiniu ir vertybiniu požiūriu. Tyrimai, atlikti įvairiose šalyse, analizuoja tiek teigiamą informacinių technologijų poveikį mokymosi procesui ir rezultatams, tiek ir probleminius aspektus, akcentuodami nepakankamą tyrimų IKT ir e-mokymosi srityje spektrą ir dėmesio stoką socialiniams, vertybiniais technologijų taikymo klausimams. Ypač tai pasakytina apie tyrimus suaugusiųjų mokymosi kontekste.

Saitynas 2.0 tvirtai įžengė į studijų erdvę, tačiau vis dar plačiai diskutuojama jo aprėptis. Saityno 2.0. technologiniai įrankiai demokrati-zavo ugdymo aplinką ir ugdymo turinio kūrimo procesą. Šiandiniame suaugusiųjų švietimo kontekste tokios technologijos kaip tinklaraščiai, socialiniai tinklai, tinklagarsiai (podcastai) siūlo autentišką medžiagą, skatina kurti bendrą turinį ir naudotis juo, priešpastatant statiškam va-dovėlių turiniui. Tyrėjų dažnai naudojamas terminas „kolektyvinis in-telektas“ yra vienas iš saityną 2.0. apibrėžiančių arba specifinių bruožų (O'Reilly, 2005). Kaip vienas pagrindinių visų šiuolaikinių technologijų sukūrimo tikslų yra siekinys pagreitinti arba palengvinti komunikacijos procesus. Socialiniai tinklai kaip vienas greičiausiai plintančių bendravimo būdų yra pripažįstamas socialinis fenomenas bei vis labiau popula-rėjanti pasaulinė masinės komunikacijos tendencija. Socialiniai tinklai plačiai apibrėžiami kaip interneto ar mobiliojo įrenginio socialinės er-dvės, sukurtos skatinti bendravimą, bendradarbiavimą ir turinio daliji-mąsi tarp kontaktų/vartotojų.

Informacinis raštingumas lemiamas šio laikmečio realijų, susijusių su naujausiomis technologijomis, informacijos gausa, apibrėžiamas kaip asmens gebėjimai suprasti informacijos poreikį, jos ieškoti, aptikti ir pa-versti savo žiniomis yra tiesiogiai siejamas su IKT ir socialinių medijų naudojimu. Informacinio raštingumo sampratos daugiaprasmiškumas, sinonimiškų terminų vartojimas lėmė gana didelį šio fenomeno apibrėž-čių skaičių. Informacinis raštingumas talpina IT raštingumą, bibliote-kinį raštingumą, kompiuterinį raštingumą, skaitmeninį ir kt. raštingu-mus. Pripažįstama, kad informacinis raštingumas kaip naujausių laikų fenomenas, keičia šiuolaikinio gyvenimo kokybę, ir ypač mokymo(si) procesą aukštojoje mokykloje. Australų tyrėjas Candy (2003) pabrėžia penkis dominuojančius mūsų gyvenimo pokyčius, darančius įtaką su-pratimui apie mokymąsi ir veikiančius mokymosi procesą šiuolaikinėje visuomenėje:

- pakitę santykiai šeimoje, bendruomenėje;
- beprecedentis gaunamos informacijos sprogimas;
- kintantis darbo pobūdis;
- globalizacija;
- naujos technologijos.

Informacijos sprogo metafora, apibūdinama tokiais žodžių junginiais, kaip informacijos perkrova, informacijos gausa, duomenų smogas, yra moderniosios visuomenės fenomenas, kuris paskatino kito fenomeno, vadinamo informacijos nerimu atsiradimą (Candy, 2003; Kapitzke, 2003). Informacijos gausos kontekste išryškėja informacinio raštingumo aktualumas, kuris akcentuojamas kaip atsakas į „informacijos perteklių“ (Candy, 2003; Bundy, 1998; Bruce 1997, 2000, 2002).

Informacinio raštingumo svarba yra akivaizdi mokymo ir mokymosi paradigmu kaitoje, kai mokymasis tampa autonomiškas, paremtas savivada, programiniuose dokumentuose orientuotas į mokymąsi visą gyvenimą. Informacinio raštingumo gebėjimai yra akcentuojami kaip mokymosi visą gyvenimą pamatas ir integrali jo dalis. Informacinio raštingumo svarbos klausimas iškyla saityno 2.0 technologijų ir ypač socialinių medijų taikymo suaugusiųjų mokymosi veikloje kontekste. IKT ir socialinės medijos suteikia prieigą prie didelės informacijos šaltinių ir formų įvairovės, mokymasis vyksta nuolat ir visur, o tai reiškia, kad vadovėlinių tiesų nebeužtenka, mokymui (si) reikalinga medžiaga dažnai pedagogiškai nepritaikyta ir neadaptuota. Informacinio raštingumo gebėjimai įgalina kritiškai (į)vertinti įvairius informacijos šaltinius, ypač internetinę medžiagą.

Informacinio raštingumo sąvoka bei jos sampratos interpretavimas yra mokslinių diskusijų objektas. Šis terminas tapatinamas su tokiais sąvokomis kaip kompiuterinis raštingumas (arba IT raštingumas, informacinių technologijų, elektroninis, ar elektroninis informacinis raštingumas) žiniasklaidos raštingumas (dar vadinamas medijų raštingumu), tinklinis raštingumas (internetinis/hiper-raštingumas) skaitmeninis raštingumas (skaitmeninis- informacinis raštingumas) arba „informatiškumas“ (angl. „*informacy*“) (Behrens, 1994; Bawden ir Robinson, 2002; Eisenberg ir kt., 2004). Tačiau pastebėta informacinio raštingumo sąvokos kur kas platesnė aprėptis. Informacinis raštingumas apibūdina bendresnius asmens gebėjimus, tokius kaip nepriklausomas, savivada paremtas mokymasis, gebėjimas naudotis informacijos šaltinių ir formų įvairove, turi galias informacijos pasaulio žinias, internalizuoja vertybes, skatinančias etišką ir teisėtą informacijos vartojimą. Doyle (1992 p. 8) pateikia išsamų „...informacijos srityje raštingo asmens apibrėžimą:

- Suvokia, kad tiksli ir išbaigta informacija yra intelektualaus sprendimo priėmimo pagrindas.
- Suvokia informacijos poreikį.
- Formuluoja informacijos poreikiais pagrįstus klausimus.
- Nustato potencialius informacijos šaltinius.
- Išsiugdo sėkmingos paieškos strategiją.
- Taikydamas kompiuterines technologijas suranda reikalingus informacijos šaltinius.
- Sugeba vertinti informaciją.
- Sugeba apdoroti informaciją praktiniam vartojimui.
- Integruoja naują informaciją į jau egzistuojančias žinias.
- Pasinaudoja informacija kritiškai mąstydamas ir sprenddamas problemas“.

Šis apibrėžimas detalizuoja ir išryškina intelektinius gebėjimus, tokius kaip „sugeba vertinti informaciją“, konstruktyvistinį požiūrį į žinių formavimą „integruoja naują informaciją į jau egzistuojančias žinias“. Informacijos srityje yra raštingas tas asmuo, kuris efektyviai demonstruoja visus anksčiau išvardintus gebėjimus ir įgūdžius.

Tyrėjai nagrinėjantys informacinį raštingumą akcentuoja socialinius informacinio raštingumo aspektus:

- keitimąsi informacija
- komunikaciją
- darbą grupėse
- socialinius gebėjimus kaip sudėtinę informacinio raštingumo komponentę.

Komunikacinė kompetencija išskiriama kaip viena iš trijų (techniniai mokėjimai, komunikacinė kompetencija, intelektiniai gebėjimai) pagrindinių informacinio raštingumo kategorijų. Virkus (2003) informacines kompetencijas rekomenduoja nagrinėti, atsižvelgiant į kontekstą ir turinį. Šios kompetencijos apibūdina konstruktyvius besimokančiuosius, o informacinio raštingumo sąvoka vartotina kaip terminas apimantis informacines kompetencijas, kurios savo ruožtu talpina gebėjimus, mokėjimus, požiūrius ir vertybes. Šių kompetencijų poreikis yra akivaizdus nuolat kintančioje darbo aplinkoje, todėl jų ugdymas universitetinių studijų metu akcentuotinas kaip sėkmingos karjeros garantas. Todėl, infor-



macinio raštingumo gebėjimai yra neabejotinai svarbūs taikant socialines medijas suaugusiųjų švietimo procese.

2007 metais UNESCO inicijavo vieningos informacinio raštingumo parametrų sistemos sukūrimą, kuri leistų išmatuoti informacinio raštingumo gebėjimus nacionaliniu ir individo lygmeniu ir pagrįstą pasirengimą dalyvauti žinių visuomenėje. Informacinis raštingumas ir medijų raštingumas tradiciškai buvo atskiri tyrimų laukai. Medijų raštingumo terminas yra paprastai konceptualizuojamas kaip žinios ir gebėjimai, būtini analizuoti, įvertinti ar sukurti medijų žinutes. Kadangi informacinio raštingumo ir medijų raštingumo sąvokos yra susijusios, 2011 m. UNESCO nutarė taikyti bendrą požiūrį, apjungiantį medijų raštingumą į jau egzistuojantį informacinio raštingumo rodiklių plėtojimo procesą. UNESCO dokumentas, parengtas remiantis atliktais tyrimais pasaulyje per pastaruosius trisdešimt metų. Dokumentas grindžiamas pagrindiniais UNESCO principais: lygiateisiškumo, kultūrų įvairovės, išraiškos laisvės.

Siekiant sukurti vieną medijų ir informacinio raštingumo apibrėžimą buvo naudojami tokie apibrėžimai:

- medijų
- medijų raštingumo
- informacinio raštingumo
- skaitmeninio raštingumo.

Saityno 2.0 eroje mokslininkai ir pedagogai praktikai, susiduriantys su dinamiškai besivystančiomis socialinėmis medijomis ir socialiniais tinklais bei jų poveikiu studijoms ir mokymuisi, pabrėžia, kad populiariausios mokymosi teorijos edukaciniame kontekste jau nebepaaiškina besikeičiančio mokymosi pobūdžio dėl didžiulio technologijų poveikio mokymosi procesui. Mokslininkai siūlo pažvelgti į šiuolaikinį mokymąsi iš kitokių perspektyvų nei siūlo tradicinės teorijos ir pastebėti barjerus, kurie trukdo švietimo įstaigoms suvokti, kokios reikšmingos tampa socialinės medijos ir socialiniai tinklai šiuolaikiniam besimokančiajam. Šiuolaikiniai besimokantieji pirmiausia suvokia socialines medijas ir socialinius tinklus kaip neformalios, kasdienės komunikacijos priemonės, kurias taip pat naudoja ir studijų bei mokymosi tikslams. Siekiant išsiaiškinti socialinių medijų ir socialinių tinklų naudojimo švietimo srity-

je poveikį, būtina tirti ir tobulinti socialinių medijų ir socialinių tinklų naudojimo studijose metodus. Be to, būtina ugdyti ir vystyti kritiško ir refleksyvaus mąstymo įgūdžius bei medijų ir informacinio raštingumo įgūdžius.

Suaugusiųjų ir aukštojo mokslo institucijos neišvengiamai turi priimti technologijų keliamus iššūkius ir neretai tos institucijos, kurios sistemingai siekia patenkinti šiuolaikinio besimokančiojo poveikius, sėkmingai susidoroja su socialinių tinklų ir socialinių medijų keliamais iššūkiais. Tiek Europos, tiek pasaulio mokslininkai dar nepakankamai ištyrė socialinių tinklų ir socialinių medijų poveikį mokymo(si) procesui, mąstymui, mokymosi būdams ir kitiems su mokymu(si) įtinklintoje erdvėje susijusiems dalykams. Teoriniai darbai ir moksliniai tyrimai rodo, kad suaugusiųjų mokymo institucijoms būtina pasinaudoti socialinių tinklų ir socialinių medijų teikiamomis galimybėmis, o besimokantieji būtų pravartu naudoti socialinius tinklus ir socialines medijas ne tik laisvalaikio praleidimui, bet ir efektyviam mokymuisi: socialiniai tinklai ir socialinės medijos turi daug galimybių tapti vertingu mokymo(si) šaltiniu ir priemone, esant tam tikroms sąlygoms. Šiandien neabejojama, kad saityno 2.0 era supurtė formaliojo mokymo įstaigas ir davė postūmį didžiulėms transformacijoms mokyme(si). Be to, šiandien mokymas ir mokymasis jau nebe atskiri procesai, o vienas procesas. Socialinių tinklų ir socialinių medijų naudotojai patys kuria turinį, kurį talpina visiems prieinamuose ištekliuose. Informacijos perteklius formaliojo mokymo įstaigoms pirmiausia reiškia tai, kad būtina išnaudoti esamą padėtį, kuomet skaitmeninėje erdvėje vis daugiau laiko praleidžiantis besimokantysis susiduria ir su tokių įgūdžių kaip multi-modalinis raštingumas, poreikiu. Formaliojo mokymo institucijos gali išnaudoti šį faktą kaip akstiną plėtoti socialinius tinklus ir socialines medijas tam, kad pačios institucijos taptų patrauklios šiuolaikiniam besimokančiajam, kad jos atitiktų jo poreikius ir mokymosi būdų pasirinkimą, kad įvertintų ir moksliskai ištyrų įtinklintoje aplinkoje vykstantį mokymo(si) procesą.

Projekto komanda ketino naudoti kiekybinius ir kokybinius tyrimo metodus ir sukūrė plačius klausimynus, tačiau atsižvelgusi į tyrimo tikslą, ribotą tyrimo dalyvių skaičių, ypač dėstytojų ir administracijos atstovų grupėse, ir ribotus resursus nusprendė naudoti atviro

tipo klausimus kokybiniams interviu. Kokybinio tyrimo strategijos, naudojant pusiau struktūruotus interviu, pasirinktos todėl, kad projekto tyrėjų komandos tikslas buvo ištirti socialinių medijų naudojimą suaugusiųjų švietime kaip mūsų gyvenamojo pasaulio reiškinių, stengiantis atskleisti jo daugiasluoksniškumą. Kalbant apie fenomenologinį reiškinių tyrimą, Heideggeris siūlė, kad mes niekad iki galo negalime prieiti prie šių abstrakčių struktūrų, nes mūsų stebėjimas visada nuspalvintas mūsų subjektyvumo. Geriausia, ką galime, - tai interpretuoti. Fenomenologija čia suprantama ne vien kaip aprašymas, bet ir kaip išgyventų su reiškiniu susijusių patirčių interpretacija, kuri kyla iš hermeneutikos, interpretacinės teorijos. Tyrimas grindžiamas fenomenologiniu interviu kaip įrankiu autentiškai medžiagai apie tyrimo dalyvių patirtį gauti. Anot Ricoeur (2000), komunikacija yra esmiško kiekvienos žmoniškosios būtybės vienatvės peržengimo ar įveikimo būdas. Autorius labai aiškiai atskleidžia komunikacijos svarbą ir galią, galią perduoti išgyventos patirties dimensijas kitam. Taip fenomenologinis interviu įgyja prasmę, tokiu būdu galime remtis pusiau struktūruotais interviu kaip autentiška medžiaga, perteikiančia tyrimo dalyvių išgyventą patirtį naudojant socialines medijas. Dar daugiau - galime šią patirtį analizuoti. Anot Ricoeur (2000), struktūrinės analizės tikslas – atlikti segmentaciją (horizontalusis aspektas) ir tada apibrėžti skirtingus dalių integracijos į visumą lygmenis (hierarchinis aspektas).

Tyrimui buvo pasirinktos trys tyrimo dalyvių grupės: dėstytojai, studentai ir administratoriai. Tyrimo dalyviai buvo pasirinkti atsižvelgiant į jų gebėjimą pateikti išsamų savo išgyventos patirties vaizdą įvaldant ir naudojant socialines medijas mokymui(si). Tyrimo dalyviai bendrais bruožais buvo supažindinti su tyrimo problematika ir tyrimo tikslu. Jie savanoriškai ir geranoriškai apsisprendė dalyvauti tyrime. Tyrimo dalyviai buvo patikinti, kad pseudonimai bus naudojami tam, kad būtų išsaugotas tiriamųjų konfidencialumas.

Empirinių duomenų rinkimui naudojami pusiau struktūruoti interviu. Atviro tipo klausimai buvo paruošti tam, kad sužadintų tyrimo dalyvių pasakojimą apie jų patirtį. Tokiu būdu buvo sukurtos galimybės giluminiam reiškiniui tirti. Interviu metu klausimai galėjo būti keičiami arba neužduodami visai, jeigu tyrimo dalyvis išsamiai pristatė savo

patirtį atskleidžiamas klausimus dar nespėjus jų užduoti. Interviu leido apklausiamiesiems patiems iškelti problemas, kurios jiems yra svarbios, taip pat apklausiamieji pateikė savo įvykių versijas.

Pirmas žingsnis empirinių duomenų analizės procese buvo fenomenologinis teksto skaitymas, interpretuojant konkrečią dėstytojų išgyventą patirtį, kai jie naudojo socialines medijas mokymui(si). Kitas žingsnis buvo reikšmingų teiginių identifikavimas, paryškimas tekste. Po to šie teiginiai buvo abstrahuojami ir atliekama struktūrinė analizė, teiginius jungiant į subtemas, kurios savo ruožtu buvo jungiamos į temas. Galiausiai temos buvo sujungtos į pagrindines dimensijas, kurios padėjo atskleisti ir išryškinti fenomeno vaizdą.

Išanalizavę tyrimo duomenis, pastebėjome, kad išryškėjo tam tikri socialinių medijų taikymo suaugusių švietime prieštaringi aspektai, kartu ir tyrimo dalyvių įvardinti privalumai. Kalbant apie prieštarigus aspektus, pirmiausia visos trys tyrimo dalyvių grupės: dėstytojai, administratoriai ir studentai, įvardijo informacinio raštingumo poreikį, kalbėdami apie laiko sąnaudas ir sunkumus apvaldant informacijos srautus, atsirenkant reikalingą ir patikimą informaciją. Kitas prieštaringas aspektas buvo tradicinių mokymosi aplinkų hierarchinės prigimties ir socialinių medijų demokratiškumo sankirta, kai studentai išreiškia norą mokytis demokratiškoje aplinkoje, tuo metu dėstytojai ir administratoriai jaučia mokymo(si) proceso kontrolės poreikį. Taip pat tyrimo dalyviai įvardija asmeninės tapatybės raiškos ir saugumo problemišumą naudojant socialines medijas. Giliai atsiskleidžia poreikis keisti ir demokratiizuoti mokymo(si) procesus, numanant netgi pačių švietimo institucijų kaitą. Apibendrinant galima išskirti pagrindinius prieštarigus aspektus, išryškėjusius tyrimo metu:

- būtinybė vystyti informacinį raštingumą;
- švietimo procesų slinktis demokratizavimo link;
- asmeninės tapatybės raiškos problemiškumas;
- saugumo problemos: tapatybės ir privatumo valdymas;
- mokymo(si) proceso kaita nuo kontrolės prie konsultacinio pobūdžio;
- formalaus, neformalaus ir savaiminio mokymosi susiliejimas;
- mokymų poreikis tam, kad geriau būtų įvaldytos socialinės medijos;

- švietimo institucijų kaita.

Kalbant apie teigiamus socialinių medijų naudojimo aspektus, tyrimo dalyviai pirmiausia įvardijo bendravimą plačiąja prasme, kuris apima ne tik asmeninį bendravimą, bet ir bendravimą edukaciniais ir reprezentaciniais tikslais. Kitas svarbus privalumas yra dalijimasis informacija, įskaitant idėjų sklaidą, bendradarbiavimą sprendžiant problemas ir dalyvaujant edukaciniuose procesuose. Dar viena labai svarbi privalumų sritis yra platus priėjimas prie informacijos ir galimybė pasiekti didelį skaičių žmonių beveik iš karto. Tyrimo dalyviai mini socialinių medijų galimybes tausojančias ir ekonomiškai naudojant resursus. Socialinės medijos taip pat suteikia galimybių vizualiai pateikti informaciją, panaudoti įvairias simuliacijas, kurios įtraukia visus sensorinius kanalus. Galiausiai žinių kūrimas bendradarbiaujant atsiskleidžia kaip viena iš svarbių socialinių medijų naudojimo charakteristikų. Apibendrinant socialinių medijų privalumus galima pateikti pagrindinius:

- išplėstas bendravimas;
- plati ir įvairiapusė informacijos paieška;
- galimybės pasiekti didelį žmonių skaičių tuo pat metu;
- informacijos vizualizavimas;
- simuliacijos (įtraukiant visus sensorius);
- dalijimasis informacija;
- naujos kūrybiškumo formos;
- ekonomiškumas, resursų tausojimas.

Socialinių medijų naudojimas suaugusių švietime turi nepaneigiamų privalumų ir, nepaisant prieštaringo poveikio, jos turi didelį naudojimo ar pritaikymo galimybių potencialą, keičiant ir tobulinant suaugusiųjų švietimą.

# APPENDICES

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## Appendix 1

### QUESTIONNAIRE FOR ADMINISTRATION

Thank you for willingness to participate in this interview! We are conducting these interviews as part of a European project on lifelong learning, called ISTUS. Here, we want to learn about the use of social media in adult education. More specific, we seek to define examples of successful and efficient uptake of technologies and application – both on an individual level of educational staff and on an institutional level.

1. What is the name of your institution?
2. What is the type of this institution
  - [a] University (Higher Ed)
  - [b] High School
  - [c] Lower high school
  - [d] VET school, college (further education)
  - [e] Adult education centre, cultural organisation
  - [f] University of third age
  - [g] Other
3. What volume of students is currently studying with your organisation?
4. How many internal staff do you have?
5. Please define your role in the administration of your institution:
6. On what levels are you offering programmes:
  - [a] Undergraduate
  - [b] Undergraduate (BA)
  - [c] Graduate (MA)
  - [d] Graduate (PhD)
7. Are your programmes
  - [a] full-time
  - [b] part-time?
8. Are your programmes
  - [a] distance learning

- [b] onsite learning
  - [c] mixed mode?
9. Are your programmes
    - [research oriented]
    - [applied]
    - [practical]?
  10. What is the average number of students in a class or a course
    - [a] 1-3
    - [b] 4-9
    - [c] 10-15
    - [d] 16-21
    - [e] 22+ ?
  11. How would you define social media?
  12. Do you use social networks (for work, leisure, learning, socialising)?
    - [a] Yes
    - [b] No
  13. If yes, can you specify what systems you use (e.g. Facebook, Twitter, Linked Inetc.)
  14. What are the reasons why you use social networks?
    - [a] communicate with friends
    - [b] communicate with faculty members
    - [c] communicate with students
    - [d] others, please specify
  15. Please give some examples of what you use social networks for and why?
  16. How has using social media affected how you work and learn – pros and cons?
  17. Do you think social networks should be used in teaching/ learning process?
    - [a] Yes
    - [b] Uncertain
    - [c] No



18. Which social networks would you use for teaching/ learning purposes (i.e. should your institution use public social networks like facebook or should they generate their own institutional social networks)?
  - [a] Public
  - [b] Private, created by the institution
19. In your institution are you asked for feedback on the courses provided and methodology used?
  - [a] Yes
  - [b] No
20. If Yes: What method of collection is used?
21. Can you describe what feedback do you get from your students?
22. Could feedback be provided by a social network?
  - [Yes]
  - [No]
23. What feedback do you expect from your students if you could do this by a social network?
24. What kind of feedback do you get from your students about social media?
25. How do you respond and take action on that feedback?
26. What is your involvement in using social media in a learning environment (appliances you use right now, future plans)?
27. What do you feel are the added values to your organisation of using social media to enhance teaching and learning?
28. What do you view are the broader business benefits for your organisation of using social media for enhancing learning?
29. Speaking of education in general: What do you see are future changes concerning the use of social media in education?
30. What limitations and challenges do you see in using social media for learning and teaching?
31. What is the overall culture within your team and organisation towards using social media in a learning environment?
32. In order to to incorporate social media into the learning environment, what are the changes your team has to make?

33. Do you feel that your organisation has the current capacity to utilise social media for learning? (Provide reasoning for your answer).
34. What changes would you like to see in the future concerning the use of social networks in the teaching-learning process?
35. How supportive is your organisation of using Social Media within a learning environment? (provide examples/reasoning for your answer)
36. What support do you provide for using social media in teaching and learning (technical, infrastructure, authoring support, time, finance, training)?

Other relevant comments:

Thank you very much, well done! The ISTUS group will publish the findings as soon as we have some reliable results. Just visit our blog at <http://istusproject.blogspot.com/>

## Appendix 2

### QUESTIONNAIRE FOR TEACHERS

Thank you for willingness to participate in this interview! We are conducting these interviews as part of a European project on lifelong learning, called ISTUS. Here, we want to learn about the use of social media in adult education. More specific, we seek to define examples of successful and efficient uptake of technologies and application – both on an individual level of educational staff and on an institutional level.

1. What is the name of your institution?
2. What is the type of this institution
  - [a] University (Higher Ed)
  - [b] High school
  - [c] Lower highs chool
  - [d] VET school, college (further education)
  - [e] Adult education centre, cultural organisation
  - [f] University of third age
  - [g] Other
3. Faculty or Department you are teaching in:
4. Type of position:
  - [a] teaching assistant
  - [b] lecturer
  - [c] senior lecturer
  - [d] associate professor
  - [e] professor
5. Please specify the subject(s) you are teaching in:
6. How long (in years) have you worked in education?
  - [a] 1-4
  - [b] 5-6
  - [c] 7-9
  - [d] 10+
7. How many hours do you teach per week?

8. On what levels are you teaching:
  - [a] Undergraduate
  - [b] Undergraduate (BA)
  - [c] Graduate (MA)
  - [d] Graduate (PhD)
9. Are your programmes
  - [a] full-time
  - [b] part-time?
10. Are your programmes
  - [a] distance learning
  - [b] onsite learning
  - [c] mixed mode?
11. Are your programmes
  - [research oriented]
  - [applied]
  - [practical]?
12. What is the average number of students in a class or a course
  - [a] 1-3
  - [b] 4-9
  - [c] 10-15
  - [d] 16-21
  - [e] 22+ ?
13. What are the types of resources and facilities you use for your teaching (on a regular basis):
  - [a] Textbooks
  - [b] supplementary material
  - [c] internet
  - [d] computer
  - [e] multimedia
  - [f] video
  - [g] others, please specify
14. Do you use e-learning platforms
  - [yes]
  - [no]?

15. If yes, can you specify what systems you use (e.g. Moodle, Blackboard, Mahara, Adobe Connect etc.)
16. How would you define social media?
17. Do you use social networks (for work, leisure, learning, socialising)?
  - [a] Yes
  - [b] No
18. If yes, can you specify what systems you use (e.g. Facebook, Twitter, Linked Inetc.)
19. What are the reasons why you use social networks?
  - [a] communicate with friends
  - [b] communicate with faculty members
  - [c] communicate with students
  - [d] others, please specify
20. Please give some examples of what you use social networks for and why?
21. How has using social media affected how you work and learn – pros and cons?
22. Do you think social networks should be used in teaching/ learning process?
  - [a] Yes
  - [b] Uncertain
  - [c] No
23. Which social networks would you use for teaching/ learning purposes (i.e. should your institution use public social networks like facebook or should they generate their own institutional social networks)?
  - [a] Public
  - [b] Private, created by the institution
24. Who should be responsible for starting activities in social networks related to teaching and learning?
  - [a] Individuals or Groups, i.e. students
  - [b] Teaching staff, i.e. the institution
25. What knowledge and skills do students need more often in their current and ongoing learning process? (Please rank according to their importance)

- [a] specific knowledge
  - [b] collaborative skills
  - [c] creativity
  - [d] social skills
  - [e] computer skills
  - [f] others
26. What skills and qualities does the use of social networks in teaching/learning process develop?
- [a] specific knowledge
  - [b] collaborative skills
  - [c] creativity
  - [d] social skills
  - [e] computer skills
  - [f] others
27. What kind of feedback do you get from your students about social media?
28. How do you respond and take action on that feedback?
29. What is your involvement in using social media in a learning environment (appliances you use right now, future plans)?
30. What do you feel are the added values to your organisation of using social media to enhance teaching and learning?
31. What do you view are the broader business benefits for your organisation of using social media for enhancing learning?
32. Speaking of education in general: What do you see are future changes concerning the use of social media in education?
33. What limitations and challenges do you see in using social media for learning and teaching?
34. What is the overall culture within your team and organisation towards using social media in a learning environment?
35. In order to incorporate social media into the learning environment, what are the changes your team has to make?
36. Do you think that educational staff are aware and up to date trends in Social Networks? (Provide some reasons.)
37. What changes would you like to see in the future concerning the use of social networks in the teaching-learning process?

38. How supportive is your organisation of using Social Media within a learning environment? (provide examples/reasoning for your answer)
39. What support do you need for using social media in your teaching and learning (technical, infrastructure, authoring support, time, finance, training)?
40. What kind of support do you get for your professional development from your institution?

Other relevant comments:

Thank you very much, well done! The ISTUS group will publish the findings as soon as we have some reliable results. Just visit our blog at <http://istusproject.blogspot.com/>

## Appendix 3

### QUESTIONNAIRE FOR STUDENTS

Thank you for willingness to participate in this interview! We are conducting these interviews as part of a European project on lifelong learning, called ISTUS. Here, we want to learn about the use of social media in adult education. More specific, we seek to define examples of successful and efficient uptake of technologies and application – both on an individual level of educational staff and on an institutional level.

1. What is the name of your institution?
2. What is the type of this institution:
  - [a] University (Higher Ed)
  - [b] High School
  - [c] Lower high school
  - [d] VET school, college (further education)
  - [e] Adult education centre, cultural organisation
  - [f] University of third age
  - [g] Other
3. Faculty or Department you are studying in:
4. How long (in years) have you been studying with this institution?
  - [a] 1-4
  - [b] 5-6
  - [c] 7-9
  - [d] 10+
5. Are you in employment, and if so what is your job title?
6. Your currently aspirated academic degree/ diploma/ qualification:
  - [a] Undergraduate
  - [b] Undergraduate (BA)
  - [c] Graduate (MA)
  - [d] Graduate (PhD)
7. Please specify the subject(s) of your programme:
8. Are your studies



- [a] full-time
  - [b] part-time?
9. Are your studies
- [a] distance learning
  - [b] onsite learning
  - [c] mixed mode?
10. What is the average number of students in a class or a course
- [a] 1-3
  - [b] 4-9
  - [c] 10-15
  - [d] 16-21
  - [e] 22+ ?
11. How many students in your study programme are you acquainted with (i.e. do you have a relationship with; someone you would share notes with, ask a question, sit next to):
- [a] 1-3
  - [b] 4-9
  - [c] 10-15
  - [d] 16-21
  - [e] 22+
12. Do you find the support for your professional and personal development by the institution you study at:
- [a] Excellent
  - [b] Good
  - [c] Fair
  - [d] Poor
13. What are the types of resources and facilities do you use for your learning process (i.e. personally, regardless whether this is intended by the educational staff or not):
- [a] Textbooks
  - [b] supplementary material
  - [c] internet
  - [d] computer
  - [e] multimedia
  - [f] video

- [g] others, please specify
14. Which of these are integrated on a regular basis / systematically by your institution?:
    - [a] Textbooks
    - [b] supplementary material
    - [c] internet
    - [d] computer
    - [e] multimedia
    - [f] video
    - [g] other
  15. Are you provided with the resources and facilities mentioned above by the faculty you study at?:
    - [a] Textbooks
    - [b] supplementary material
    - [c] internet
    - [d] computer
    - [e] multimedia
    - [f] video
    - [g] other
  16. Do you use e-learning platforms?
    - [yes]
    - [no]
  17. If yes, can you specify what systems you use (eg Moodle, Blackboard, Mahara, Adobe Connect etc.)
  18. How would you define social media?
  19. Do you use social networks (for work, leisure, learning, socialising)?
    - [a] Yes
    - [b] No
  20. If yes, can you specify what systems you use (e.g. Facebook, Twitter, Linked Inetc.)
  21. What are the reasons why you use social networks?
    - [a] communicate with friends
    - [b] communicate with faculty members
    - [c] communicate with group mates for learning directed by institution

- [d] communicate with group mates for learning on my own initiative  
[e] others, please specify
22. Please give some examples of what you use social networks for and why?
23. How has using social media affected how you work and learn – pros and cons?
24. Do you think social networks should be used in teaching/ learning process?  
[a] Yes  
[b] Uncertain  
[c] No
25. Which social networks would you use for teaching/ learning purposes (i.e. should your institution use public social networks like facebook or should they generate their own institutional social networks)?  
[a] Public  
[b] Private, created by the institution
26. Who should be responsible for starting activities in social networks related to teaching and learning?  
[a] Individuals or Groups, i.e. students  
[b] Teaching staff, i.e. the institution
27. What knowledge and skills do you need more often in your current and ongoing learning process? (Please rank according to their importance)  
[a] specific knowledge  
[b] collaborative skills  
[c] creativity  
[d] social skills  
[e] computer skills  
[f] others
28. Which do you think the study programme should support?  
[a] specific knowledge  
[b] collaborative skills  
[c] creativity  
[d] social skills

- [e] computer skills
  - [f] others
29. What skills and qualities does the use of social networks in teaching/learning process develop? [a] specific knowledge
    - [b] collaborative skills
    - [c] creativity
    - [d] social skills
    - [e] computer skills
    - [f] others
  30. In your institution are you asked for feedback on the courses provided and methodology used? [a] Yes
    - [b] No
  31. If Yes: What method of collection is used?
  32. Can you describe what feedback you gave to the institution?
  33. Could feedback be provided by a social network?
    - [Yes]
    - [No]
  34. What feedback you would provide if you could do this by a social network?
  35. Do you think that educational staff are aware and up to date trends in Social Networks? (Provide some reasons.)
  36. What changes would you like to see in the future concerning the use of social networks in the teaching-learning process?  
Other relevant comments:

Thank you very much, well done! The ISTUS group will publish the findings as soon as we have some reliable results. Just visit our blog at <http://istusproject.blogspot.com/>

## Appendix 4

### Institutions participating in the project

#### **Wissenschaftliche Hochschule Lahr Graduate School of Business and Economics AKAD Bildungsgesellschaft mbH**

The WHL is part of the private AKAD network of Higher Education institutions which provides extra-occupational courses on a blended learning basis (online learning, course books, and block seminars). The WHL offers Master degrees in business related fields, including business education, for about 600 students, who come from different German speaking countries. The WHL consists of seven departments, among these the Department of Vocational and Economic Education. Around 40 persons (full-time and part-time) teach at the WHL in six different master courses.

The course in business education prepares students for secondary and vocational schools, adult education and corporate training as well as Human Resource development. The students of this course, who already have a degree in business and who are working in this field, provide high input of practical experience which feeds into the learning/teaching process.

The Department of Vocational and Economic Education has a strong research focus in the fields of adult and business education, work-related learning, basic education, business ethics, competence measurement and technology-enhanced learning. Members of the departments are/were participating and partly coordinating a set of national and international projects dealing with (among others): teacher competences, adult and vocational education, educational standards and technology-enhanced learning (e.g. the current Grundtvig-Learning Partnerships: “Digitclass - Digital Classroom” or “ISTUS - Institutional Strategies targeting the Uptake of Social Networking in Adult Education”).

Website: [www.akad.de](http://www.akad.de)

### **NTI Nederlands Taleninstituut BV (NTI)**

NTI is one of the most important distance learning educational institutes in the Netherlands. With almost 70 years' experience, NTI currently offers over 800 courses, from short ones to masters degrees for part-time students who combine work, social life and study. NTI has over the years rightfully secured its position as a market leader for distance learning. With an annual intake of about 10,000 students, NTI Institute for Vocational Education (NTI MBO-College) offers over 50 secondary vocational programmes in economics, education and social work via distance learning. NTI University of Applied Sciences, with an annual intake of 8,500 students, offers 17 Bachelors programmes in economics, business administration, law, psychology and social work, as well as a Masters programme in business administration. In addition, NTI provides hundreds of short courses on languages, mathematics, administration, marketing and all sorts of basic skills for about 30,000 people a year. The educational concept is based on blended learning, comprising an ideal mix of online (distance) and classroom training. NTI organises practical training throughout the Netherlands, in Groningen, Apeldoorn, Eindhoven, Leiden, Amsterdam, Utrecht, Middelburg and many more places. The focus of NTI lies on re-skilling adult people to help them fulfil their goals.

Website: [www.NTI.nl](http://www.NTI.nl)

### **Clyde Education Limited trading as ICS**

International Correspondence Schools (ICS) is committed to life-long learning and improving economic, social and cultural skills for its learners – both individuals and corporate.

With over 120 years of experience, ICS has amassed a wealth of knowledge and expertise within the education sector. As a flexible learning provider, we have evolved our core business model, of providing distance learning courses to the consumer market, to the provision of specialist education services for further education, higher education, and public and private sector organisations throughout the UK.

Our flexible model is based on delivering learning at a time, place and pace to suit our customers and with a focus on quality – supported

by our relationships with over 20 awarding bodies. Since our inception in 1890 we have supported over 13 million learners and 10,000 businesses to achieve their learning objectives.

With ICS's courses and services being in a distance learning format, and with the flexibility to learn around an individual's lifestyle, does provide an excellent framework for people with specific needs.

People who may have missed out on education in the usual time frames for learning, due to fear of social exception find distance learning a convenient option. With the availability of subject experts for consultation, technology enabled support for their learning and social needs they find distance learning a good option to have another chance at re skilling themselves to achieve future goals.

For people from the strata of society who may have financial constraints, distance learning also provides a cost-effective way without the additional overheads of time and travel to achieve their future goals. The learning and social environment at a learning institution is recreated online. This enables them to experience the same learning as they would in a physical learning environment.

Distance learning also instills skills to be an effective digital native in this increasingly digital world. This also allows learners to develop lifelong learning skills - a necessity in this fast changing world.

Website: [www.icslearn.co.uk](http://www.icslearn.co.uk)

### **Mykolas Romeris University (MRU)**

MRU is a modern, dynamic and the 2nd largest university in Lithuania with over 21000 students who study in the fields of Economics, IT Science, Law, Public and Business Management, Political Science, Psychology, Sociology and Social Work, etc. The mission of the University is to educate youth, to nourish intellectual potential, to train leaders capable of creating and implementing innovations, which influence the overall scientific, cultural and technological progress changing society. MRU is a member of IAU, EUA, AUF and other key international organizations, cooperates with over 200 universities, public and business entities. Student and staff exchange, networks and EU, national and international programmes, including LLP, FP7, NordPlus, COST are some

key factors for internationalization complemented by several European joint degree programmes, English-taught study programmes and courses for degree and exchange students. The 2012-2013 academic year at MRU has begun with introducing not only updated study curricula but also a particularly relevant priority - promoting entrepreneurship across all study programmes.

Website: [www.mruni.eu](http://www.mruni.eu)

### **TRAINING 2000 spc**

TRAINING 2000 is a Vocational Training Organization, which operates mainly in the Marche Region in activities of Adult Education and Training (LLP - continuous and permanent education), consulting and promotion of Innovative Technologies in companies, training of trainers in ICT in education. Since 1994, Training 2000 organizes Vocational training courses in the areas of ICT, sustainable environment, new methodologies in teaching and learning (blended-learning) and social media in education. Training 2000 is a “Certified centre for training” in the Marche region, it operates in regime of quality and cooperates in Regional and European networks of different actors: Employment Offices, Trade Unions, Associations of SMEs, Public offices (Province of Pesaro and Urbino, Marche Region), University of Macerata, University of Bremen, University of Utrecht, University school of Lugano (SUPSI), University of Ancona, private and public institutions in the social sector and different schools of the territory.

Training 2000 analyses the training needs in SMEs and local communities, evaluates new occupation profiles and development of new curricula; executes vocational training courses apt to requalification and re-skilling of youths and adults in major economic sectors.

Since 2002 it promotes new methodologies for training in adult’s education and e-learning tools for teachers and school managers. At the International level, Training 2000 takes part in the following LLP programs: Leonardo da Vinci, Socrates Grundtvig, LLP programme and Culture.

Website: [www.training2000.it](http://www.training2000.it)



### **Scuola universitaria professionale della Svizzera italiana (SUPSI)**

The University of Applied Sciences of Southern Switzerland (SUPSI) is one of the 7 Universities of Applied Sciences in Switzerland. It has a university statute, focused on professional training and applied research. Together with the University of Southern Switzerland (USI), to which it is closely linked, it is the only Italian language university pole in Switzerland.

SUPSI federates 5 departments and 3 affiliate schools, blending a wide range of competences in different domains, ranging from Engineering to Music and Theatre, from Innovative Technologies to Education, and from Healthcare to Management and Social welfare.

SUPSI offers more than 30 Bachelor Degree and Master Degree courses, and provides a number of continuous education courses, including Master of Advanced Studies (MAS), Diploma of Advanced Studies (DAS) and Certificate of Advanced Studies (CAS). It has more than 800 collaborators and about 2000 students in Bachelor and Master Studies and 2000 in continuous education.

Since its foundation, SUPSI has completed numerous research projects in key sectors funded by means of European and National research programs. The great number of applied research projects allows SUPSI to contribute directly to the economic and social development of the region.

Within the Department of Innovative Technology (DTI), the LSMS lab is active in different research areas such e-learning, social media and web technologies and since 2002 has participated in the various e-learning projects of the LLP programs.

Website: [www.supsi.ch](http://www.supsi.ch)

### **Tampere University of Applied Sciences (TAMK)**

Tampere University of Applied Sciences (TAMK) offers Bachelor and Master level studies for approximately 10 000 students in seven educational fields. The education focuses on technology, business, tourism, as well as health and social welfare services. The School of Vocational Teacher Education (TAOKK) is also a part of TAMK. TAOKK provides the pedagogical qualification required of teachers in vocational institutions.

The tasks of the universities of applied sciences also include applied research and development as well as offering working-life based services. In the field of international education TAMK is an active member of Future Learning Finland, which is a national education export programme offering Finnish educational know-how and learning solutions globally. TAMK's profile is a multidisciplinary and international university of applied sciences which focuses on promoting wellbeing and health, business and production as well as learning and creativity.

Website: [www.tamk.fi](http://www.tamk.fi)



**Vaičiūnienė V., Mažeikienė V., Valūnaitė Oleškevičienė G.**

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*Mokslo studijoje „Socialinės medijos suaugusiųjų švietime“ pateikiami socialinių medijų taikymo suaugusiųjų švietime tyrimų, atliktų pagal Grundtvig partnerystės projektą „Institucinės strategijos, kurių tikslas – socialinių tinklų panaudojimas suaugusiųjų švietime (Institutional Strategies Targeting the Uptake of Social Networking in Adult Education (ISTUS) 2011–2013 metais, rezultatai. Studijoje nagrinėjami būdai, kaip suaugusiųjų švietimo institucijos gali naudoti socialines medijas tam, kad pagerintų mokymo(si) procesus. Projekto tyrėjų komandos tikslas buvo ištirti socialinių medijų naudojimą suaugusiųjų švietime kaip mūsų gyvenamojo pasaulio reiškinį, stengiantis atskleisti jo daugiasluoksniškumą. Studijoje išskiriami pagrindiniai prieštaringi aspektai, išryškėję tyrimo metu, atveriantys naujas galimybes tolimesniems moksliniams tyrimams.*

*The edited book „Social Media in Adult Education“ presents the results of the international research carried out within the framework of Grundtvig multilateral partnership project “Institutional Strategies Targeting the Uptake of Social Networking in Adult Education (ISTUS)” focusing on the use of social media in adult education. The ways how institutions of adult education envision social media application to improve teaching/learning processes are analyzed in the book. The project team aimed at researching the multiple phenomenon of the use of social media in adult education, as a phenomenon of our living world, revealing the multifaceted nature of the phenomenon. The main contradictory aspects are distinguished in the analysis of the research results which open up new perspectives for further research.*

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Vilhelmina Vaičiūnienė, Viktorija Mažeikienė, Giedrė Valūnaitė Oleškevičienė

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Puslapis internete [www.mruni.eu](http://www.mruni.eu)

El. paštas [leidyba@mruni.eu](mailto:leidyba@mruni.eu)

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El. paštas [info@bpg.lt](mailto:info@bpg.lt)